NOTE

This Microfiche meets the quality requirements of the American National Standard for Microfiche of Documents (ANSI PH5.9-1975). However, because of imperfections in the document from which it was made, it contains images that are illegible or difficult to read. The source document for this microfiche is the best copy that could be obtained prior to filming.

Congressional Information Service, Inc.

S. HRG. 100-129

NATIONAL GOALS—EDUCATION

HEARING

BEFORE THE

COMMITTEE ON LABOR AND HUMAN RESOURCES UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

REVIEWING NATIONAL GOALS IN EDUCATION

JANUARY 14, 1987

Printed for the use of the Committee on Labor and Human Resources

U.S. GOVERNMENT PRINTING OFFICE

74-573 WASHINGTON : 1987

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

S541-33

COMMITTEE ON LABOR AND HUMAN RESOURCES

EDWARD M. KENNEDY, Massachusetts, *Chairman*

CLAIBORNE PELL, Rhode Island
HOWARD M. METZENBAUM, Ohio
SPARK M. MATSUNAGA, Hawaii
CHRISTOPHER J. DODD, Connecticut
PAUL SIMON, Illinois
TOM HARKIN, Iowa
BROCK ADAMS, Washington
BARBARA A. MIKULSKI, Maryland

ORRIN G. HATCH, Utah
ROBERT T. STAFFORD, Vermont
DAN QUAYLE, Indiana
STROM THURMOND, South Carolina
LOWELL P. WEICKER, JR., Connecticut
THAD COCHRAN, Mississippi
GORDON J. HUMPHREY, New Hampshire

THOMAS M. ROLLINS, *Staff Director and Chief Counsel*
HAYDEN G. BRYAN, *Minority Staff Director*

CONTENTS

STATEMENTS

WEDNESDAY, JANUARY 14, 1987

	Page
Association of Minority Health Professions Schools, prepared statement	228
Barton, Paul E., Associate Director, National Assessment of Educational Progress, Educational Testing Service; and Dr. Lewis Branscomb, former vice president, IBM, and Director, Science, Technology and Public Policy Program, John F. Kennedy School of Government, Harvard University, Cambridge, MA	48
Prepared statement of:	
Mr. Barton	51
Dr. Branscomb	62
Bennett, Hon. William J., Secretary, U.S. Department of Education, accompanied by Bruce Carnes, Deputy Under Secretary of Education	8
Prepared statement	9
Doyle, Frank P., senior vice president, General Electric Company, on behalf of the Committee for Economic Development, prepared statement	221
Futrell, Mary Hatwood, president, National Education Association, and Jacqueline Vaughn, vice president, American Federation of Teachers, AFL-CIO, and chairman, Legislative Committee	82
Prepared statement of:	
Ms. Futrell	85
Ms. Vaughn	97
Graham, Patricia Albjerg, dean, Harvard Graduate School of Education, prepared statement	225
Hatch, Hon. Orrin G., a U.S. Senator from the State of Utah, prepared statement	4
Murakami, Shin, student, Winston Churchill High School, Potomac, MD	42
Rich, Dorothy, president, Home and School Institute, prepared statement	211
Shields, Dorothy, director, Department of Education, American Federation of Labor and Congress of Industrial Organizations, prepared statement	216
Wagner, Robert F., Jr., president, New York City Board of Education; Dr. Robert Taggart, director, Remediation and Training Institute; Dr. David C. Knapp, president, University of Massachusetts, and chairman, Massachusetts Corp. for Telecommunications; and Raymond Flynn, Mayor, Boston, MA	114
Prepared statement of:	
Dr. Taggart	120
Dr. Knapp	183
Mayor Flynn	198

ADDITIONAL MATERIAL

Questions and answers:	
Secretary Bennett's responses to questions submitted by Senator Simon and the Committee	25
Responses of Dr. Taggart to questions submitted by Senator Kennedy	177

NATIONAL GOALS—EDUCATION

WEDNESDAY, JANUARY 14, 1987

U.S. SENATE,
COMMITTEE ON LABOR AND HUMAN RESOURCES,
Washington, DC.

The Committee met, pursuant to notice, at 9:30 a.m. in Room SD--430, Dirksen Senate Office Building, Senator Edward M. Kennedy (Chairman of the Committee), presiding.

Present: Senators Kennedy, Weicker, Pell, Simon, Cochran, Stafford, and Harkin.

The CHAIRMAN. We will come to order. We are delighted to have the Secretary of Education, Secretary Bennett, with us here this morning. We are grateful to him for appearing before us before he goes to the Budget Committee.

He has to meet with the Budget Committee to consider the education function at 10:15 so, although we are always glad to see the Secretary and the spokesman on education for the Administration, we are also somewhat troubled that we will not have more time to get into those particular programs. But we will look forward to a later opportunity to examine them in greater detail.

I know the Secretary has a brief statement, and then we will move to questions. And what we will do is that we will recognize, in terms of the questioning, the Chairman of the Education Committee, the Ranking Minority, and then Senators in the order that they appear. Senator Weicker will be the first questioner after I have had a brief opportunity for questioning.

Senator PELL. Excuse me. I would like to make a short statement.

The CHAIRMAN. Yes.

Senator PELL. I regret very much indeed that I cannot be here for your statement in full. I can only stay for a little while because we are presiding over a meeting of the Senate Foreign Relations Committee at the same time. But I do thank you for coming here and I congratulate our Chairman on organizing these Goals in Education hearing.

The CHAIRMAN. Thank you, very much. On the statements, anyone who wants can have a statement included in the record, and I will include mine as if read. I will read it after the Secretary is here, for the Members, if anybody feels strongly about it, but it will utilize time. But I, and the Senator from Connecticut, and the Senator from Rhode Island will consider those statements in the record as if read.

[The opening statements of Senators Kennedy, Pell, Stafford, and the prepared statement of Senator Hatch follow:]

Opening Statement of Senator Edward M. Kennedy

Senator Kennedy. The third of four hearings by the Senate Committee on Labor and Human Resources will examine what is happening in America's classrooms.

We want to know why the Japanese high schools graduate more than 90% of their students, while only 70% of American students make it. We want to know why our students aren't doing as well as they were several years ago, and more importantly we want to know how much better we can do and when we can do it.

I cannot stress enough the importance of this fundamental issue.

The economic battles of tomorrow are being fought in the classrooms of today. But too many of our children are being disarmed unilaterally by educational policies and budget dogmas that are anti-student, anti-opportunity and anti-future. The prospects are bleakest for the children most neglected in recent years. School systems and educational institutions may be restored to their former stature, but the children whose lives have been stunted by these years of neglect may never be restored to their full potential.

As we are all only too aware, we are working today under the shadow of an enormous federal deficit. States and localities, too, are feeling the crunch. We must do more with less. We must ask not only what resources we need, but how to extract the most from those resources. We must seek ways to stretch education funds, so that every dollar spent is used effectively. We must pursue principles which reward school districts for meeting improvement goals. We must adopt programs which combine federal dollars with funds from states, localities, and private industry in order to stretch our resources as far as possible. Through satellite technology, for example, we can make a wealth of rich new educational possibilities available to pupils whose horizons are limited by schools too poor or too remote to provide them. These are the kinds of ideas we must seek out.

We welcome the participation today of many distinguished experts in the field and invite them to offer assessments of where we are today and what our goals for the future should be. As we formulate our agenda for the 100th Congress, we look to new ideas and guidance. Our concerns for the young people of our nation and for our nation as a whole are common ones. Let us work together to improve education for American citizens.

Opening Statement of Senator Claiborne Pell

Senator Pell. Mr. Chairman, I regret very much that I will be unable to participate fully in this national goals hearing on education, but this is the opening day of Senate Foreign Relations Committee hearings on Iran and my responsibilities as Chairman require that I be there.

I do want to take this opportunity, however, to welcome the Secretary of Education to this forum. While I am going to have to leave early today, I want you to know how very much I am looking forward to your appearance before the Education Subcommittee on March 5th, which will be the opening day of hearings of reauthorization of the Elementary and Secondary Education Act.

Statement of Senator Robert T. Stafford

Senator Stafford. I am pleased to participate today in this full committee hearing to examine National Goals in Education. For the past several years national attention has focused sharply on the quality of education offered in our public and private institutions. Numerous reports have articulated the strengths and weaknesses of elementary and secondary schools, teacher training programs, and our vast array of postsecondary institutions. This self-examination has sparked education reforms on the Federal, State and local levels.

Education issues will have a prominent place on the agenda for the 100th Congress as they have in the past. Strong bipartisan support will ensure appropriate funding for the vital education programs authorized by the Congress. The reauthorization of the Education Consolidation and Improvement Act will move elementary and secondary programs into the spotlight that higher education issues enjoyed for the past two years. Today's hearing provides a comprehensive review of accomplishments to date and the opportunity to set future priorities. In this Senator's view, the Federal priority in education should be the promotion of quality education programs for those who have traditionally been excluded from the benefits of education opportunity, the handicapped and the disadvantaged.

I particularly look forward to the testimony of Secretary Bennett, who I know, has been busy already working on the administration's proposals for ECIA reauthorization.

[The prepared statement of Senator Hatch follows:]

From the office of

SEN. ORRIN HATCH

Washington, D.C. 20510

January 14, 1987

CONTACT: Irene Forde-Howard
202/224-3491

STATEMENT OF SENATOR ORRIN HATCH (R-UT)

Committee on Labor and Human Resources

OVERSIGHT HEARING

"National Education Goals"

Mr. Chairman:

I am pleased that today's hearing on national goals will focus on education. Education is not only the key to the future of our nation's young people. Increasingly it is also the key, in a technologically more complex and changing economy, to retaining opportunity for full participation in our society by older citizens as well.

Important as it is, education is traditionally the province of our states and local governments, as illustrated by the fact that approximately 8.94 of every dollar spent on education in this country comes from the pockets of state and local taxpayers. And so it should remain. Those on the local scene will know the local circumstances and needs far better than those of us in Washington, D.C.

Nevertheless, there is and should continue to be a national interest in education. The federal taxpayer's contribution, though small, has an important role to play. For instance, it can help ensure that less advantaged groups, such as the handicapped or the educationally and economically disadvantaged children served by Chapter 1 of the Education Consolidation and Improvement Act, have their fair share of educational opportunity. While keeping us competitive in our ever more complex technological world, the national role in education can also lend a helping hand to individuals who otherwise might have little access to postsecondary education.

Accepting this responsibility, last year, Congress reauthorized the Education for the Handicapped Act, the Rehabilitation Act, and the Higher Education Act of 1965. This year we will turn our attention to elementary and secondary school programs funded under the Education Consolidation and Improvement Act. I look forward to working once again this year with my colleagues on both the Education, Arts, and Humanities Subcommittee and the full Labor and Human Resources Committee in the same spirit of bipartisanship.

I am pleased to note that some of the topics to be discussed today are major concerns underlying all federal and state and local educational activities. We must ensure that all our citizens acquire the basic skills of literacy and numeracy. Basic, ordinary, everyday tasks are impossible without these skills.

To this end, it is especially important that the federal government encourage innovative approaches in such areas as bilingual and continuing education. Thus, I commend the Department of Education, and my colleague Senator Quayle, for their sponsorship of new, more flexible and creative approaches to teaching limited English-proficient children. I note that the full Congress, in the Higher Education Amendments of 1986, authorized new approaches in continuing education -- approaches which, I hope, will receive favorable consideration from the Appropriation Committees.

Today, we shall also highlight the need for new methods to promote good teaching as a central part of enhancing educational quality. On that score, let me note how proud I am that, from my own state of Utah, the Salt Lake City and Provo school districts have been chosen to participate in the "Time for Results" program originated by the National Governor's Conference and assisted by the Department of Education. This program increases flexibility by, for instance, eliminating unreasonable impediments such as excessive paperwork and regulations as long as immediate, tangible educational progress is the result.

In closing let me also add that, while today we focus on educational quality goals and tomorrow seek to fine-tune the small but vital role the federal government can play in improving educational access and quality, we must not forget the significance of parental involvement in the child's education. In the end, only a partnership which effectively includes the parent in defining and reinforcing the child's education will lead to meaningful educational reform and improvement.

Mr. Chairman, again I congratulate you on this early series of hearings on our national goals for highlighting education as we are doing today. I hope that in the 100th Congress you and I can continue to work together, as we did in the 99th Congress, and with our knowledgeable colleagues on the Education, Arts, and Humanities Subcommittee, in this effort. All our citizens, the students of today and of tomorrow, will benefit from this cooperative effort to enhance the quality of education available in this country.

****

The CHAIRMAN. Mr. Secretary, we look forward to hearing from you. Thank you.

STATEMENT OF HON. WILLIAM J. BENNETT, SECRETARY, U.S. DEPARTMENT OF EDUCATION, ACCOMPANIED BY BRUCE CARNES, DEPUTY UNDER SECRETARY OF EDUCATION

Secretary BENNETT. Thank you, Mr. Chairman, Members. I appreciate the opportunity to appear before you. As you know, and as you mentioned, Senator, our previously scheduled appearance before the Budget Committee will require me to leave at about 10:10. I shall, therefore, be brief.

I will certainly submit my statement for the record, too. I would just comment by way of summary, in the statement, using as an occasion the chart that I have seen before—I think that is from one of our news magazines—and just comment that although the U.S. standing in education in various areas is not what it should be, as that chart indicates, I think there is some reason to be optimistic.

We have, I think, successfully turned around the serious decline in American education that we saw in the 1960's and 1970's, and in the last five or six years, I am happy to say, during this Administration's watch, things are looking up. Test scores have stopped their decline. They are on the increase. Attention is being paid to the right issues. We see increasing evidence of interest at the state level in education on the part of Governors, who, of course, have a principal responsibility there.

And just, in general, the debate, the level of research, the application of sound research to educational practice, I think, bodes well. We still have a ways to go, but I am optimistic about the future direction of education in America, and we hope that overall we are playing a positive role. We believe we are.

Other than that, I would be happy to submit the rest of my statement for the record, Senator.

[The prepared statement of Secretary Bennett follows:]

Statement of the Honorable William J. Bennett

Secretary of Education

Before the Senate Committee on Labor and Human Resources

January 14, 1987

Mr. Chairman and Members of the Committee:

I appreciate this opportunity to appear before you today. As you know, a previously scheduled appearance before the Senate Budget Committee will require me to leave at 10:10 a.m. I shall therefore be brief.

During the Reagan Administration, a vigorous education reform movement has taken hold in this Nation. During the 1960s and 1970s, despite large increases in federal funding and new federal programs, our schools suffered and educational performance declined.

In the 1980s, the situation has been turned around. Though there are some who talk darkly about "retrenchment" and "retreat," the facts are clear: <u>American education has improved on this Administration's watch</u>. By virtually any indicator, the educational opportunities for all of America's children are more promising today than they were six years ago.

o SAT scores declined 90 points from 1962 through 1981; they have reversed that decline, and increased 16 points since 1981.

o Thanks to a growing economy and a vigorous education reform movement, total national spending on education has increased 15 percent, in real dollars, since 1981; this reversed a decline in national spending on education during the Carter Administration.

o Teacher salaries have increased 14 percent in real dollars since 1981, and the number and the quality of those entering the teaching profession has increased. This year, the number of college freshmen declaring an interest in a teaching career has increased for the fourth year in a row.

o States have increased graduation requirements, raised standards, improved their assessments of educational performance, and have taken responsibility for upgrading their schools.

o Thanks in part to the leadership provided by this Administration, we are enjoying heightened national attention to and a vigorous national debate on education. Most important, we are focusing on the right issues -- standards, basics, discipline, values, high expectations, and above all on what works in the education of our children.

o Reports such as A Nation at Risk, What Works, First Lessons, Schools Without Drugs, and Japanese Education Today have provided useful and reliable information to the American people; armed with such information, the American people are at work fixing our schools.

o Under this Administration's leadership, we have become serious about getting drugs out of our nation's schools.

o We shall be focusing attention during the coming year on what works in the education of disadvantaged children, reporting to the American people on what works in educating those children who need a good education most. We shall also be introducing legislative proposals to reform the federal government's remedial education and bilingual education programs, proposals that will improve the federal government's ability to promote good education for these children.

The American people have set about improving our schools. I believe we can look forward to continued educational progress in the next two years, and I look forward to working with this Committee to help effect such progress.

The CHAIRMAN. Thank you, Mr. Secretary. I think all of us are impressed by your visitations to a number of the schools around the country—that has been true in my state, I know, and many others—and also the identification of those schools that have some particular source of excellence. I think that it is certainly encouraging for other school children, principals, and teachers, to know that there are schools that are really functioning and working effectively. I think there is no question that the overwhelming numbers of teachers and superintendents and school boards are desirous of giving the whole issue of education the highest priority.

In the course of the past two days of hearings it has been made clear—and I think this will be underscored by examining the testimony for the next hearings—you do not really need a hearing to know that the future of this country is dependent upon the quality of education. And it starts off in the elementary and the secondary schools and continues on in higher education.

And I think the American people put the highest priority on the whole question of education. We have heard, even from a member of the Armed Services Committee, that the United States Navy, as we move into the 1990's, is going to require that one out of two or one out of two-and-a-half recruits be college graduates. The military force is spending billions of dollars to give basic elementary training to young people who have graduated from high school and college in order that they can serve in our armed forces.

So whether we are talking about national security, whether we are talking about values necessary to be a democracy, whether we are talking about international competition, education is key. And I think I asked the question that you will be asked many, many times—why does the Administration not give it the kind of priority that it should have?

We recognize that throwing dollars does not answer the problem, although I have just left the Armed Services Committee where we heard that the Secretary of Defense somehow believes that it does in terms of MX missiles and "Star Wars."

But money does not solve it. But there is no question that we see a serious deterioration and erosion in terms of financial commitment, whether it is in providing food for young people that are in the school lunch program—how can a child learn that is hungry?—or whether it is giving them the kind of skills needed in vocational education—and we see an eradication of the federal commitment. It has been the federal commitment that has led the states, with certain exceptions, to try and provide the kind of skills that every person, including your own Secretary of Labor and others that are concerned about the competitive position of the United States in the world, believe are going to be essential.

And it is a serious abdication, I believe, in commitment in higher education, where you are rolling the dice with a loan program for young people who today are relying on the student loan program, and do not have the resources that a few people in our society have to go to college. And you are rolling the dice with a kind of a loan program that has been untested, untried, and the supporters of which, I find, are pretty much limited to your own Department of Education, and we are really rolling the dice in terms of higher education.

I would be interested if you would respond to this.

Secretary BENNETT. Sure. I think the most important thing that we need to note, particularly when we bring up analogies to defense spending and the like, is the obvious fundamental starting point, which is the federal government's unique responsibility to provide for the common defense. That is the federal government's responsibility, and it is the federal government's responsibility in toto.

In education, of course, the main responsibility is not the federal government's. It is that of states and locales. The federal government should meet its share of the responsibility. We think we have done that, provided for that in our budget. But the main thing is, really, what is done by others, and a federal education budget that has oscillated between six and eight percent of total national spending—clearly the federal government is not the main player. Therefore, it is always a mistake to look at a federal level as if this was tantamount or equal to the national level.

The CHAIRMAN. But you were not reluctant to take credit for it when you were talking about the change in the SAT scores. You just said that they changed on your watch.

Secretary BENNETT. Right, but——

The CHAIRMAN. The fact is, those scores have only gone up in one year and you still do not compare to what the SAT scores were in 1970 and 1960. So if you are going to take the credit in terms of elementary and secondary education, do not abdicate at least some responsibility in what Congress has mandated in terms of Title I programs; in terms of the handicapped programs; in terms of vocational education; in terms of trying to provide compensatory education; all areas in which Republicans and Democrats alike have agreed. That is what we are talking about.

Secretary BENNETT. Well, if you want to systematically misrepresent what I am saying, Senator, you can. But I did not say that this Administration caused the increase. I said it happened on our watch. That is a preemptive comment to make in anticipation of what I expected you would say, which is that we have seen an erosion of commitment and that because of this Administration, education is in a tailspin.

It is not in a tailspin. It is in better shape now than it was in the 1970's, in all levels. And if you want to look at expenditures, we have a chart here that shows what expenditures are for education.

The CHAIRMAN. I will accept the expenditures but——

Secretary BENNETT. You will note expenditures for education have gone up during the 1980's, during this Administration.

The CHAIRMAN. Do you think there are many parents in this country that believe that the quality of education of the public school system today has gone up?

Secretary BENNETT. Yes. And I can prove it by poll data. The American people, in the last five years, believe their schools have improved rather dramatically, yes, sir. And in many cases they have improved dramatically.

The CHAIRMAN. There is no question that there are individuals, there are teachers, there are students striving, dedicated, committed to improving, but I dare say that if you asked the parents in this country—outside of those who are losing a job and have not

got a home and cannot feed themselves—what their number one concern is, it would be the quality of education in their public schools. And I think most parents in this country feel that there is a crisis in our country. That is my experience. I have not got the polls.

Secretary BENNETT. That is just not factually the case, Senator. Most people believe the school system has improved, their school systems have improved in the last five years, and there is pretty good evidence that it has. We are in the midst of an educational reform movement in this country which is serious.

Many people in the elementary and secondary levels have taken the challenge very seriously. They are pulling up their socks, trying to improve their schools. And the sense of the public is that schools are improving. We still have a ways to go, but the sense is very clear.

If I could comment further on the Income-Contingent Loan Program. It is not just this Administration that thinks it is a good idea. There are many other people who think it is a good idea.

The idea for an Income-Contingent Loan Program originated with some people in higher education, some college and university presidents; John Silber at Boston University, in your state, and Father Byron at Catholic University, have come up with ideas like that. The New York Times thinks it is a good idea, and so does William Raspberry, and neither of them work for the Department of Education.

The CHAIRMAN. Well, I will just say on that, that I sponsored the Silber proposal so I am familiar with it.

Secretary BENNETT. Right.

The CHAIRMAN. There is no one that questions, I think, the value of providing additional kinds of requirements for those, which in a progressive way are going to make a greater payback. I do not question that. But that is entirely different from this proposal. That had a revolving fund, which you do not have.

And the fact of the matter is, there was substantial support among the financial community, for that proposal, but you have not got it. You will find that the commercial banks have indicated that, basically, they do not believe that it is going to work, and they are the ones that are going to provide the loans.

So, before you get into who is for it and who is against it and what parts they are for and what parts they are against, the parents of this country ought to understand that this program has never been put into effect, that you signed a pilot program on this three months ago. It has not been tried. It has not been tested.

You are gambling with the future of young people's education, and there are many of us who disagree and we are going to see what we can do to try and insure that we are going to have stability, we are going to have predictability, we are going to have certainty, and that we are going to continue to strengthen, and improve these programs, in the future.

You are recognized.

Secretary BENNETT. Okay. Well, one might have said some of the same things about any of the loan programs that we have put into effect. We do not know how it is going to come out. No one can accurately predict the future 100 percent, of course. That is true.

But we did not ask for a pilot program. We asked for $90 million. Congress gave us a pilot program. How could it not work as well as some of the current loan programs when what you are doing is providing students the same amount of money—indeed, even more in some cases—and making the terms of repayment less burdensome for them. It has got to work effectively. I think every plausible shot at this will show that it will work.

The CHAIRMAN. Senator Stafford.

Senator STAFFORD. Thank you, Mr. Chairman. I do have an opening statement. I would ask the unanimous consent it be made a part of the record, together with the others at the appropriate place.

The CHAIRMAN. Yes.

Senator STAFFORD. Mr. Secretary, I welcome you here.

Secretary BENNETT. Thank you.

Senator STAFFORD. I understood that we were not going to give in to budgetary matters this morning, and I will not at any great length.

Secretary BENNETT. I did not start it.

Senator STAFFORD. As far as——

The CHAIRMAN. I do not know who agreed to it.

Senator STAFFORD. As far as elementary, secondary education is concerned, I would only have one basic criticism there, and that is that the vocational education seems to be zeroed out. I had a chance to discuss these matters with the Director of the Office and Budget and Management earlier this week.

Secretary BENNETT. I saw that.

Senator STAFFORD. So my views on the whole subject, probably, are known to those who want to know what they are.

I am unhappy, I would say, with the allocations for higher education, but those may turn into more of a budget discussion and debate with the people who are appropriating money than with you, Mr. Secretary, and we do need to work together on elementary and secondary education this year.

And I will pursue, as far as I can, with the leadership—the Chairman of this Committee and the Chairman of the Education Subcommittee—our very strong desire to achieve a reasonable funding for the higher education programs that we did write last year and which the President signed, and which, I think, ought to continue at least at the levels at which they exist in the current budget for Fiscal Year 1987.

But rather than to dissipate our discussion with you on that subject, we may take it directly to Mr. Miller and to those on the Appropriations Committee of the two Houses.

Secretary BENNETT. Well, we would certainly be happy to talk to you about it, Senator, and I will be talking to Senator Chiles and his colleagues for the next few hours this morning.

I saw your brief electronic discussion with Mr. Miller on Sunday, and I would have added a couple of points. There is no principled opposition on our part to vocational education or vocational education programs. This was one of the last things discussed in our request to OMB, and we looked for ways to save some amount of money for vocational education, but as you know, we are working

under Gramm-Rudman targets, the reductions are required, and it ended up being a zero request.

Again, that does not bespeak a principled opposition. Vocational education dollars are 90, 92 percent at other levels. We do not think the vocational education enterprise will stop or be slowed down by our request if it is granted, but it certainly is not a statement about the significance or value of vocational education.

I am glad you are otherwise pleased with our elementary and secondary, and as to higher education, we would like the opportunity to discuss with you in some detail our ideas.

Senator STAFFORD. All right. When you come back, Mr. Secretary, to the $5 million pilot program that we did write into the higher education program last year as an alternative funding mechanism for students, I do have to comment here—and this is no criticism of you—but in another field in which I am vitally interested, environmental legislation, every time we try to push ahead on something like acid rain the immediate comeback from the Administration is, we have got to have more research, we have got to keep researching this until we understand it.

So we are in kind of the opposite position here, of taking a program which we started, which was supposed to have its first evaluation in five years, and the Administration telling us, we are going to go ahead with the whole program now and not wait to see whether it works or not. I wish we could find a middle ground in the two different areas.

Secretary BENNETT. Well, we would certainly be happy to talk to you about that. I would say that our request, as large as it is—a 12,000 percent increase, I guess, in the Income-Contingent Loan Program over the pilot—is not as large as we might anticipate for future years. So we still regard this as in the experimental mode.

Senator STAFFORD. All right. Thank you, Mr. Chairman.

The CHAIRMAN. Before yielding, would you tell us what requests you made of OMB in education, in higher education.

Secretary BENNETT. In higher education?

The CHAIRMAN. Yes.

Secretary BENNETT. I do not have the figures at my fingertips. I think I can give them to you. I do not recall the rules now. Is this information that I am appropriately to give to you?

The CHAIRMAN. Sure. [Laughter.]

Secretary BENNETT. Thank you, Justice. We would be happy to give it to you.

The CHAIRMAN. Do you remember whether you requested it on vocational education?

Secretary BENNETT. I do not recall. If you will give me one second——

Mr. CARNES. Senator, we——

The CHAIRMAN. Just identify yourself.

Mr. CARNES. I am Bruce Carnes, Deputy Under Secretary of Education. We did, in the initial submissions to OMB, submit budgets that met the outlay targets as laid out to us by OMB. These outlay targets result in different mixes of budget authorities—if you forgive the detail.

That means, in some cases, as you arrange your programs you can have more or less funding in one given area. As the fall pro-

gressed there were new cost estimates and economic assumptions which were submitted and made public which affected T-bill rates and affected costs. In order to meet our outlay targets we had to do some trimming in some areas.

The CHAIRMAN. Well, we will await your other response. But I think it would be unfortunate for the American people to think that Education's policy is being decided by outlay recommendations of OMB rather than those who are the professionals, whether we agree with you or whether we differ. And that, I think, is troublesome.

Secretary BENNETT. Well, yes.

The CHAIRMAN. Senator Pell.

Senator PELL. Thank you, Mr. Chairman. And I would like to say at this open meeting how much I think the cause of education owes to the stewardship of Senator Stafford over these past six years in a not altogether fertile climate. And he really did a wonderful job for all of us who are interested in education. I want to make that public acknowledgment to him.

I just have one quick question. I was particularly interested, obviously, in the so-called Pell Grants, and now I notice about a million young people—four thousand in my own state—will be knocked out if the budget recommendations of the Administration are carried out.

I was wondering what the rationale was for that, besides just saving money?

Secretary BENNETT. Because of saving money?

Senator PELL. Yes. Was there any other rationale for doing that? What was the reason for focusing on that?

Secretary BENNETT. Well, obviously, what drives the budget request—the main thing that drives the budget requests under Gramm-Rudman law that we are operating under is to reach target. So we had to make rather substantial cuts in the education request. As you know, Senator, about half of our budget is in higher education, so there was the place we looked—and had to look. It would be inconceivable for us to think about cutting 25 or 30 percent of our entire budget and leaving higher education intact.

The second point, though, I think—a different issue—is a choice between, on the one hand, extending to students the level of higher education loans, rather than grants, choosing that over choosing serious reductions or deep cuts in Chapter 1, education of the handicapped, and the like.

And we opted for the former on grounds that it is important to continue to do the work that Chapter 1 does when it works effectively, that special education does, that the other elementary and secondary programs provide to get students to a position where they can think about going to college; work for the younger children first before they drop out of the system.

Then if a student is in a position of going to college and funds are limited, my conscious is clear about saying, look, we don't have the funds for a Pell Grant—indeed, I don't think there is anything so-called about them, but that's what they are, Pell Grants—but loans will be available for you and we will try to provide loans for you under our plan, which will make repayment easier.

So there is that philosophical point. We did not look at our budget and say, we have to make a 23 percent cut so we are just cutting everything right down the line. We made decisions.

Senator PELL. What has happened, as you know, is that we have moved from where it was about half loans and half grants, which was at the beginning of your watch, to now where it is about two-thirds loans and one-third grants, roughly.

Secretary BENNETT. Yes.

Senator PELL. Is this a healthy situation? Because it means that the career choices of many of the people who graduate with these huge debts will not be able to go into what they would like to do—teaching, social services, things of that sort—but have to go into a more profitable job.

Secretary BENNETT. I do not know, Senator. A couple of comments. When I graduated from law school I was pretty heavily in debt. In 1971 I owed about $12,000 or $13,000, which I guess is about $30,000 at today's levels. It did not affect my career decision. I still went into teaching and university administration work. I think people are likely to—if they really want to do something they are likely to do it anyway.

But two other points I would make. We have seen this shift. I think you are right. We need to look at it and be concerned about it—as the report that we saw a couple of weeks ago indicated—pay attention to it. But as the proportion has shifted from grants to loans we have not seen, we cannot track this as having a depressing effect on people going to college.

Five years ago some 51 percent of our high school graduates were going on to college. Last year it was 60 percent. This during the same period that we saw the shift from grants to loans. The question is, what kind of burden does the loan present? And what do students tell us after they graduate and get into the work force? What kind of burden does it present? And of course, partly to respond to that is the reason we offer a big increase in the Income-Contingent Program.

Then, if you owe $10,000, or $20,000, or even $30,000, but your repayment schedule can be tied to your income in a way that we propose in our ICL program, the earnings that you—your earnings increase, which is there as a result of your college education—$640,000 is what that college degree means—it doesn't seem unreasonable for people to pay $20,000 or $30,000 back out of that, if it is done in the right and sensible way.

Senator PELL. I thank you very much for your reply. I think not every young man or woman has the same drive and ability that you have and I think the fact you did it does not mean that everybody else can do it. But I look forward to resuming this conversation March 5th when we will be holding our first hearing in the Subcommittee on Education. If you will excuse me, I have to go.

Senator STAFFORD. Would the Senator yield for just a second on his time? I just wanted to say thanks for his kind words and to point out very emphatically that nothing that we were able to do in education over maybe the last dozen years, and certainly over the last six years, would have been possible without the partnership of Senator Claiborne Pell.

The CHAIRMAN. Well, the rest of our Committee agree with both of you. We think you are absolutely marvelous. I say it sincerely.

I had mentioned earlier, that we have got a limited period of time. We are going to recognize Senators in the order in which they came into the room. Senator Weicker.

Senator WEICKER. Thank you very much, Mr. Chairman. I want to associate myself with your opening remarks as to a macro-overview of the performance of the Administration in the area of education, a performance that is considerably different as between words and requests for appropriations. Indeed I think it is safe to say that over the years if indeed education has improved it has been because of Congressional rejection of Administration education budgets and the substitution thereof of Congressional budgets for education.

Point number two, before I get to a specific, I would appreciate it if we would no longer blame Gramm-Rudman for your budget, Mr. Secretary. Do not blame it on Gramm-Rudman. Blame it on the priorities of the Administration. The money can come out of defense just as well as it can come out of education.

Secretary BENNETT. No, no sir.

Senator WEICKER. These are the priorities of the Administration.

Secretary BENNETT. No, sir.

Senator WEICKER. And your constitutional argument is also spurious, for the simple reason, that same constitution which calls for providing for the common defense, includes the words, "promote the general welfare." So the obligation is equally on the federal government to do both.

Now, I would like to bring it down to the micro, if I will, and that is the early intervention programs, the education of the handicapped. Last year the Congress went ahead and passed legislation that included a reauthorization of a new program for early intervention services for handicapped infants from birth through age two.

The Department of Education stated in its 1985 report to Congress that studies of the effectiveness of preschool education for the handicapped have demonstrated beyond doubt the economic and educational benefits of programs for young handicapped children. In addition, the earlier intervention is started, the greater is the ultimate dollar saving and the higher is the rate of educational attainment by these handicapped children.

To put that in a dollar sense—and this comes from the Department of Education, its 1984 report to Congress—if intervention began at birth, education costs to age 18 were projected to be $37,000. If, however, intervention was delayed to age six the cost was projected to be $53,000.

And so my question to you, Mr. Secretary, is why do you propose to eliminate all funding for a program your own Department recognizes as having demonstrated beyond doubt to be of economic and educational benefit to young handicapped children?

Secretary BENNETT. Let me first comment, Senator, on your general comment. Am I to take it from your general comment that you think the federal government's responsibility in the area of education is the same, identical, to its responsibility to provide for the common defense?

Senator WEICKER. I think it is whatever is needed. Whatever is needed. And certainly the area which we are talking about right now and to which I am directing my question—special education—the federal government's role is a dominant one.

Secretary BENNETT. But in terms of——

Senator WEICKER. The states have not picked that up. I would appreciate your answering the question as to why you have zero funded early intervention programs for our children?

Secretary BENNETT. As you know, I would still like to debate that other issue with you, because I do not think you really would want to turn that around and say that the states and locales should be providing for the common defense to the extent that that is needed, so that we have 14 different Air Forces running around. And would you really, as a Republican—you are a Republican, Senator—would you really like to have the kind——

Senator WEICKER. Longer than you have been, Mr. Secretary. [Laughter.]

Secretary BENNETT. Yes, sir. On the longevity meter you got me. On other meters, maybe I got you.

Senator WEICKER. I am asking for a response to the question as to why you zero funded the early——

Secretary BENNETT. But look, Senator, you come out and you make——

Senator WEICKER. I am asking the question——

Secretary BENNETT [continuing]. You make a large-scale charge here against me——

Senator WEICKER. Would you respond?

Secretary BENNETT [continuing]. And against my reasoning. Let me respond to the first thing you said.

Senator WEICKER. All right.

Secretary BENNETT. That is, would you want the kind of federal control of education which would come with funding of a percentage of education tantamount to what we do in defense. That is, do you want the federal government drawing up the curriculum and everything else?

Senator WEICKER. Mr. Secretary, you have indicated that you had to cut your budget because of Gramm-Rudman.

Secretary BENNETT. That is right.

Senator WEICKER. I suggest to you, you cut your budget because of the priorities of this Administration.

Secretary BENNETT. Well, priorities certainly have a lot to do with it, but they come right back to this question, Senator.

Senator WEICKER. There is no legal obligation put upon you by Gramm-Rudman to cut your budget.

Secretary BENNETT. There is a legal obligation for the Administration request to be lower because of the Gramm-Rudman targets. You cavalierly say, you do not have to take it here, just take it out of defense. Just take it out of defense.

Senator WEICKER. Mr. Secretary——

Secretary BENNETT. That is something worth talking about, Senator, whether one just takes it out of defense.

Senator WEICKER. Would you respond to the question as to why you zero funded education for the handicapped insofar as the early intervention program is concerned?

Secretary BENNETT. As you know, Senator, our request for 1988 in this area represents an increase over 1986. It does not request funds for several of the programs that you added on in last year's budget. Mrs. Will and I have talked about this. We think, as you know from Mrs. Will, that this program is poorly targeted, that there is overlap with HHS, and we will be happy to talk to you in greater detail about this at the time of Subcommittee hearing.

Senator WEICKER. You seem to be somewhat at a loss of words on the very specific question that was asked of you when indeed your own Department indicated the economic benefit, never mind the educational benefit, in this area. You have zero funded early intervention services.

The 1988 request for the basic state grant program for the handicapped is almost a $100 million less. The preschool grant program is about one-half, and the other discretionary programs, again, are reduced, so that the total budget request 1988 versus 1987 is about $300 million below 1987 insofar as our disadvantaged handicapped children are concerned.

Secretary BENNETT. Well, again, Senator, your numbers——

Senator WEICKER. I thought you responded to Senator Pell that you wanted to protect this group so that they would have the opportunity to get into college?

Secretary BENNETT. Well, I think we are. I think we are.

Senator WEICKER. Who do you protect by reducing your budget? In other words, your words——

Secretary BENNETT. No, no——

Senator WEICKER. I will no longer accept your words compared to your budgets.

Secretary BENNETT. Well, we can certainly look at the budget figures and look at the details of it.

Senator WEICKER. Well, that is the zero funding for early intervention.

Secretary BENNETT. We think, again, that there are problems in targeting. These are matters we can discuss in greater detail when I have more time. I am scheduled to be before Senator Chiles in about five minutes, Senator.

I will be happy to talk to you about it in greater detail, but our request for education of the handicapped, throughout, through all of our programs is an increase over 1986. It is not an increase over 1987 appropriation. And this is because additional funds were appropriated, at your urging, and we understand your reasons for them.

I do not argue that in the most general way these are not programs which can do great good. But we are simply not in the position to recommend increases in the 1988 request under current conditions. We are simply not.

The CHAIRMAN. Mr. Secretary, I know you have to go. I will ask Senator Simon to get a quick question.

Senator SIMON. Yes, just very quickly. First, I want to underscore what Senator Weicker said. Gramm-Rudman did not dictate these priorities. Gramm-Rudman dictated what the bottom line is going to be.

Secretary BENNETT. Right.

Senator SIMON. I would say, second, when you say the federal government has a unique responsibility to provide for the federal defense, I would agree with you. But I have yet to talk to a general, a sergeant, a private, anyone—when you say what is the great need in terms of defense, I have yet to have someone say, we have got to have more missiles.

What they tell me is, the American citizenry is not adequately prepared. And so, the personnel problem is the number one problem. And if we really want to do something on defense, I think we ought to be cutting back on some of these missiles and helping some grade school and high school and college kids a lot more.

Secretary BENNETT. I think we can—excuse me, Senator.

Senator SIMON. Yes.

Secretary BENNETT. I think we can both build the missiles that we need for the defense of the country and provide better for the education of our citizens. If the implicit premise here is that the American people are underinvesting in education, I would reject it.

Again, I would draw your attention to that chart—you were not here, I guess, Senator, when I pointed it out.

Senator SIMON. I was here and——

Secretary BENNETT. Expenditures are going up and up. The problem with the American educational system is not that we are not spending enough. It is inefficient. We spend more of our GNP on education than do the Japanese. I do not have to tell you about the efficiency of the Japanese system. We have a system which is generously funded and inefficient.

Senator SIMON. But what has been lacking, I would suggest, with all due respect, is some federal leadership. Let me, if I may, get back to the Pell Grant thing just very briefly. In the 1976–77 school year—the last year for the Ford budget, the last Republican Administration—grants, 80 percent, loans, 20 percent; 1984–85 school year, grants, 47½ percent, loans, 45 percent; under this budget projection, 33 percent for grants, 66 percent for loans.

And what is interesting is, you parallel—as you follow the shift in minority entrance into college—is as you increase loans you have a decrease in that student minority enrollment. One of the realities is that if you—we just had testimony in here yesterday—and the Chairman can correct me—but I think it was that 44 percent of the new jobs created last year were below $7,400 a year.

The CHAIRMAN. Sixty percent, 60 percent of the 10 million.

Senator SIMON. Sixty percent of the 10 million were below $7,400 a year. You take somebody who is earning $7,000 a year and you say, oh, you can go to college, you can accumulate loans. In your terms, $30,000. That is horrendous. It discourages people from going to college. That is the reality. It is a reality, it seems to me, you have not faced.

Secretary BENNETT. Senator, you have got to look at the facts here. First of all, $7,000, family, or an individual who is the only member of the family at $7,000 is going to be just as eligible for grants under our proposal as he was before.

Second, on minority enrollment, you cannot make the case that as you shift from grants to loans minority enrollment decreases. In the 1970's when student aid levels were increasing, you could track year after year minority enrollment was decreasing.

Right now, in the last five years, as the proportion is shifted from grants to loans, more students, not fewer students are going to college. More students are going to college. Well, are we worried about the——

Senator SIMON. But what about minority students?

Secretary BENNETT. It is pretty flat over the last five years. It is pretty flat. I can give you the numbers on that. But what about career choices? Everyone has said that in this new period of increased loans, people are not going to go into the professions which do not pay a lot of money, like teaching.

The problem is the evidence shows that we have more and more people coming up, declaring they want to be teachers this year than last year, and last year than the year before that. So one cannot make the case there.

I am concerned, as you are, Senator, with the question of loans and what kind of burden they constitute. That is why we have paid such close attention and pushed our proposal on the ICL.

Senator SIMON. Well, I would simply suggest the evidence is as we shifted, that minority—you say it went flat, however you want to characterize it—minority enrollment in colleges—there was a shift in that graft when we went from one to the other.

Secretary BENNETT. I will tell you something flatly, based on everything I have read and my experience in visits to 60 schools around the country, mostly innercity schools, if you want minority enrollment to increase in college, put the heat on the elementary and high schools to do their job, to have those kids in the innercities, the disadvantaged, work up to high standards, do their homework, learn to read by third or fourth grade.

That is where the problem is. In the South Bronx, where I was yesterday, I asked those children what their plans were and they are all going to go to college. And some of them will go on grants and some will go on loans, but they are planning to go because their aspirations are high.

Some schools instill those aspirations and some schools kill children's aspirations. If you want to look at minorities in college, you have got to look at the elementary and the secondaries.

Senator SIMON. I would suggest it is not the either or.

The CHAIRMAN. Let me just——

Senator SIMON. If I may have one more minute, Mr. Chairman, because I think that one of the basic mistakes—you have contributed much by making education much more visible—but one of the great differences between the way you operate and your predecessor, Ted Bell, operated—also appointed by the President—was, Ted Bell was in there fighting for every dollar he could get for education.

He did not just take that OMB figure. He went in and visited on at least two occasions, and perhaps, the President of the United States and said, we have got to have more funding. He was around these halls telling us, we have got to fight for this thing. I just do not hear that fight from the Secretary of Education today.

And he is a Secretary of Education with great ability who could launch a great fight. Instead he is leading retreat when he ought to be leading the charge.

Secretary BENNETT. Thank you for that half-complement, Senator. I am not Ted Bell, and to paraphrase J. Alfred Prufrok, nor was meant to be. I am a different person. I am leading a different kind of fight.

If I thought that a 10 percent increase of federal funding would make those charts change dramatically, I would recommend it. That is not our problem. We have got plenty of money. We are just not spending it in the right way.

I have to go. I have enjoyed the philosophical discussion. I have got to talk about the budget now with Senator Chiles.

The CHAIRMAN. We will have you over at 10:15. I do not want to interrupt the Republican over here.

Senator COCHRAN. I was just going to make the observation, Mr. Chairman, that one way we could deal with this deficit problem, I think, is to get a bigger room and sell tickets to these hearings——

The CHAIRMAN. Right.

Senator COCHRAN [continuing]. And we could make a bigger allocation to the education budget.

But I do note and congratulate you for winning approval of a $200 million increase for the disadvantaged children educational programs. In my state we have a higher percentage of disadvantaged chiidren than in any state in the union, of the school-age population. That is going to be very important to states like Mississippi when we try to upgrade the curriculum and devote more teacher time to those students who do need the extra attention to do the things you are talking about doing; increase their aspirations, stimulate them, motivate them—that is what we are hoping this will accomplish.

Thank you for winning that battle.

Secretary BENNETT. Thank you, Senator.

The CHAIRMAN. Give 15 seconds to Senator Harkin. Tom, I am sorry. He has to leave at 10:15, if you had anything quick?

Senator HARKIN. No questions.

The CHAIRMAN. Mr. Secretary, we are grateful for your presence. You can tell that we are interested in this whole education program. Our full Committee is. They have been involved, and feel strongly about it. We want to work with you. You have gotten voices of harmony and voices of questioning, but we want to work with you. That, I think, is a common commitment of the Members of this Committee.

And we are grateful to you for coming here this morning. We are thankful to you for your presence, and we look forward, all of us, to working with you.

Secretary BENNETT. Thank you, Mr. Chairman.

[Secretary Bennett's responses to questions submitted by Senator Simon and the Committee follow:]

QUESTIONS SUBMITTED BY SENATOR PAUL SIMON

POSTSECONDARY EDUCATION

Question: The Administration proposes a cut of over $2 billion in grants and work-study awards for needy students, and proposes to substitute $600 million dollars in loans under a new program. What do you estimate will be the impact on the amount of debt students must incur to finance college education? Have you made estimates on how many students will not return to school because of the need to borrow more and because of the uncertainty of receiving aid under the proposed reductions in Pell Grants and campus-based aid?

Answer: The Department estimates there will be increased lending in these programs, as follows:

(In Millions of Dollars)

	Increase: 1988 Request Compared With 1987 Appropriation
Income-Contingent Loans..... (Includes $600 million in new appropriations, plus $388 million in relending by institutions of Perkins Loan collections, institutional matching funds, and Federal Perkins Loan collections.)	+$988
Supplemental Loans for Students (SLS).....	+160
Parent Loans for Undergraduate Students (PLUS)..	+309
	+1,457

Increased lending in these programs would help offset proposed reductions in grants and work-study awards as well as in other more subsidized loan programs such as Perkins Loans (no new Federal capital contributions) and regular Guaranteed Student Loans (modest reductions in borrowing limits). In total, it is estimated that approximately 14 percent less federally supported aid would be utilized by students because they would choose to work more, obtain more family assistance, draw upon other sources for assistance, or attend less costly schools.

Although fewer students overall are expected to avail themselves of federally supported aid, the Department believes no students who want to go to college would be unable to go because of changes in Federal student aid programs.

Question: The Administration's proposals emphasize student borrowing to pay for the costs of attending college. You not only propose to transfer to the student the cost of the student loan subsidy (an average of $ on a four-year loan balance of $10,000), but you also intend for the student to begin paying part of the "special allowance" when he or she enters repayment. For a student who is not eligible for a Pell Grant--anyone from a family with an AGI above $20,000--and who would not receive any campus-based funds, except your Income-Contingent Loan program, how much debt would a student accumulate at a private college with $9,000 in tuition, room and board and mandatory fees (from a family with $30,000 income and one child in college) over four years? What would be that student's repayment period and how long would the student have to repay the accumulated debt? What if the student married someone who was similarly situated, except the spouse went on to medical school and accumulated $85,000 in loan debts. At what point would they pay off principal, interest, the added subsidy and the special allowance under your proposal?

Answer: Let's assume the first hypothetical student borrowed the following amounts annually: $2,500 from the GSL program; $1,800 from the SLS program; and $2,000 from the ICL program. (Under Uniform Methodology need analysis the family would be expected to contribute the remaining $2,650 per year.)

After five years the student's total debt, including capitalized interest (accumulated while in school), would be $31,227.

By consolidating the regular GSL and SLS loans, the monthly payments on the consolidated loan would be fixed at $174 over a 25-year period. Monthly payments on the ICL would vary with income, but would average $225 after the second year of repayment; and the loan would be paid off in seven years. (This assumes a starting income of $20,000 per year, with income growing at rates of 10% in the first two years and 8% in subsequent years.)

Thus the student's loan repayments would be set at $205 per month for the first two years ($174 plus $31 for ICLs) and would average around $400 per month during the period three to seven years after graduation; after that time repayments would fall to $174 per month. Paying off the debt would not be especially onerous considering that the student's annual income would be $32,900 in the sixth year after graduation (the year the student's total payments would peak at $448 per month) and the student's loan debt maintenance would constitute less than 15% of gross income.

In the case of the second student, who borrowed $85,000 as an undergraduate and as a medical student, the following distribution is assumed: GSL - $25,000; SLS - $10,000; ICL - $16,000; HEAL - $34,000. Consolidating GSL and SLS loans would give the borrower 25 years in which to repay, at a monthly rate of $285. The ICL could be paid off in 10 years at a rate of $63 per month for the first two years and at an average rate of $345 per month after the second year of repayment (making the same income assumptions as above.) The HEAL loans would be paid off in 15 years at a monthly cost of $291. Note that the income assumptions are quite conservative for this profession. (The mean salary of physicians is currently about $100,000 per year.)

Question: There is no legislative authority for the expanded Income-Contingent Loan Program which you propose. There is only the $5 million Pilot Program with 10 institutions which was authorized during the reauthorization of the Higher Education Act. When do you propose to submit legislative language to the authorizing committees for the expanded program?

Answer: The Department expects to submit a legislative proposal to the authorizing committees for an expanded Income-Contingent Loan Program by the end of March or early April.

Question: From the Budget Committee standpoint, your proposed budget for postsecondary education contains an expanded legislative proposal for an Income-Contingent Loan Program (ICL). We can't make budget allocations on the basis of unauthorized programs. If we were to adopt your $600 million figure in lieu of the more than $2 billion you propose to cut in grants and work-study for needy students, and the ICL fails to be enacted, how many eligible students would go unaided or receive reduced awards?

Answer: If the expanded ICL fails to be enacted, the Department expects there would be more demand for Supplemental Loans for Students (SLS) and Parent Loans for Students (PLUS) as well as for regular Guaranteed Student Loans. These programs, however, do not have important extended repayment and income-contingent terms which the ICL program offers.

It would be difficult, however, to predict how many students would seek greater amounts of SLS and PLUS loans or regular GSL loans rather than choose to work more, to draw upon additional family resources, to utilize other non-Federal student aid resources, such as State or institutional aid, or to attend less costly schools.

Question: Under the new ICL program, you propose that: (a) unlike most current Federal programs, interest on the borrower's loans would accrue and be added to the principal while the borrower is in school; and (b) in repayment, if 15 percent of the borrower's income is not adequate to cover the interest, the excess interest be added to the principal. Are you not concerned that students who do not make high incomes will have to pay on their loans for the rest of their lives?

Answer: What happens with regard to students who do not make high incomes will depend, of course, upon how much they borrow. Students from low-income families will still be eligible for significant Pell Grant assistance--approximately $2.7 billion in 1988. Students will also continue to work. This is a source of billions of additional dollars annually. In addition, there are billions of dollars in State and institutional aid available.

Another factor will be the choice of postsecondary institution and its cost.

Most borrowers who choose or find themselves in low-paying employment will probably not have accumulated excessive debts and will be able to repay their loans within a reasonable number of years. In those presumably few cases where students both borrow a large amount and find themselves in low-paying employment, caps on repayment rates will ensure that the resulting debt does not entail excessive monthly and annual repayments.

Question: Why do you request only $1.1766 billion for the GSL program in FY 88, when $3.004 billion was appropriated in FY 87? What do you estimate that the GSL program would cost in FY 88 under current law? What would the FY 88 program cost if your proposals for changes in allowances to the lenders were implemented? If, as you propose, the special allowance for lenders is reduced and they must also collect in-school interest from students on a quarterly basis, what effect would this have on the participation of lenders in the GSL program?

A survey of 18 financial institutions in central Illinois was taken in 1986, and 17 of the 18 institutions indicated that they would not participate in student loan programs if the special allowance were reduced to 3 percent--a full quarter point above your proposal.

Answer: The $1.8 billion reduction in GSL is composed of the following:

- o savings of $1.3 billion due to proposed program policy changes, of which about $550 million relates to elimination of student in-school interest subsidies, $375 million relates to new student guarantee fees designed to pay for growing defaults, and $375 million relates to other policy changes.

- o savings of nearly $500 million due to built-in changes in interest rates, loan volume, collections, and other factors.

The FY 1988 current law cost estimate for GSL is $2,855.9 million.

If only the proposed change in the special allowance for lenders were implemented, the FY 1988 GSL program costs would be $2,832.9 million, a reduction of $23 million.

The effect on lender participation of the proposed special allowance reduction and lender collection from the student of the in-school interest is difficult to quantify. The Department believes, however, that the proposal is feasible. Importantly, students would have the option of allowing the interest to accrue, thus reducing lender administrative costs, and the Department believes that the vast majority of borrowers would avail themselves of this option rather than paying while in school.

The Department also points out that lenders have traditionally predicted lender non-participation in the face of special allowance reductions, multiple disbursement requirements, regulatory due diligence requirements, and so on. Such reductions in participation have not yet been observed. For example, during the first year of Gramm-Rudman, the special allowance payment to lenders was reduced by 0.4 percent on all new loans without any apparent adverse effect on lender participation.

Question: You have spoken out often about the need for improving the quality of our schools and yet you have proposed eliminating all programs in the Department which assist colleges and universities in this area, such as library support, international education, graduate education, etc., and cutting in half the budget for the Fund for the Improvement of Postsecondary Education. You request no funds for the new Title V designed to improve pre-service and in-service teacher training and re-training. How can the elimination of this modest $500 million investment for all these programs be seen an enhancing quality?

Answer: Colleges and universities can do many things to enhance quality without spending money--and, in the process, even save money. These include raising standards; focusing the curriculum on core subjects, reducing administrative overhead, and similar measures.

In addition, the programs you list are all small and narrowly focused, and most are not focused on the areas where quality is most in need of improvement. Many of them duplicate other programs, and hence are not an efficient use of Federal funds. Others have achieved their original purposes and funding is no longer effective. As such, these programs are not good investments nor likely to have a significant effect on the quality of postsecondary education.

Question: Your budget proposes to transfer $287 million in surplus GSL funds into the Pell Grant account for FY 87, of which $225 million is designated to eliminate prior-year shortfalls. Can you explain how $225 million can be sufficient to wipe out all prior-year shortfalls which last year were estimated at close to $500 million?

Answer: The $225 million estimate takes into account, of course, the $100 million the Congress has already appropriated for the shortfall in 1987. The remaining savings are a result of changes in cost estimates for academic years 1984-85, 1985-86, and 1986-87.

Question: In nearly every past budget submission the Administration has proposed increases for college work-study--in your terms--self-help component of student assistance. Yet in this budget, you propose its elimination. Are we to infer that you now think that debt rather than work is the way for students to finance their education? How much debt do you feel is reasonable for students to assume?

Answer: The Department still believes work is a very important component of student self-help. Loans, of course, are simply a way of deferring the work. Students may work now to meet educational costs; or work later, by borrowing now, and be better able to concentrate on their studies.

Most student employment occurs outside the college work-study program--in the private sector. Billions of dollars in student work-related income will continue to be available from this source--particularly as the country's economy continues to grow.

The Department does not believe there is any one "reasonable" level of debt for students to assume. It is up to the individual student, not the Government, to determine where he wants to go to school, how his education should be financed, and how much of that total should be in the form of loans. Different amounts will be "reasonable" for different students at different schools in a variety of financial circumstances.

Question: New data suggest that enrollments have dramatically declined for low and middle-income students. Aren't you concerned that your budget proposals for Pell, CWS, and SEOG programs and a more than 50 percent reduction in TRIO programs will accelerate this trend?

Answer: Data from the Census Bureau's Current Population Survey (CPS) show that while the proportion of students from low-income families (families earning under $20,000 in constant 1984 dollars) declined from 22.8 to 20.0 percent--the number of college students from low-income families increased 16 percent between 1978 and 1984.

There are, of course, a number of factors that influence individual decisions to go to college. The Department does not believe that marginal reductions in subsidized financial assistance will be a decisive one, and notes for example the dramatic decline in minority enrollment between 1976 and 1980--a time of significant liberalizations and appropriation increases in all of the Title IV programs. In any case, Department proposals have deliberately and consistently focused student aid resources on the lowest-income students.

Question: Two small programs--Business and International Education, authorized at $5 million and currently funded at $2 million, and the new $10 million authority for Economic Development Partnerships are the only Education Department programs targeted for improving America's international competitive posture. You have requested immediate termination of funds for the former and no funds for the latter. Do you see no role for the Department in efforts to boost productivity and enable us to compete more effectively in international markets?

Answer: The Department believes that its role in improving America's international competitive posture extends far beyond these two categorical programs.

Central to achieving competitive preeminence is the need for our society to continue the reforms for excellence in our schools. As outlined in the President's Competitiveness Initiative on January 27, 1987, there are five key areas in which the Education Department has exercised and is continuing to exercise leadership. These include:

1. Improving Basic Skills
2. Raising Standards
3. Helping Needy Schools and Youth
4. Promoting Literacy, and
5. Instilling Productive Habits and Values

Our efforts in these area are described further in the President's Competitiveness Initiative.

QUESTIONS SUBMITTED BY PAUL SIMON

ELEMENTARY AND SECONDARY EDUCATION

Question: Unlike last year we do not see your voucher plan. In its place is a voluntary compensatory education certicate (CEC). How much would these be worth per pupil?

Answer: The amount of a CEC would not be specified by law but would be determined by the local educational agency at a level equitable to all students. It could not exceed the cost of compensatory education services purchased by the parent.

Question: How much will CECs buy in terms of private school tuition, transportation and services at other public schools or after-hours private tutoring?

Answer: The CEC program, where it is implemented, would permit parents to purchase only compensatory education services from whatever source the local school district determines is able to provide appropriate and effective compensatory education services. The program would not cover tuition costs at a private school.

An LEA may, but is not required to, use funds it receives under Chapter 1 to meet the additional costs for transporting a child who uses a CEC to obtain compensatory education services at a site other than the child's home school.

Because CECs could only be used for compensatory education services, they should have the same purchasing power as the existing compensatory education dollar. Tutoring may be less expensive than current services (less administrative overhead). The added tranportation costs that may be incurred because of implementing CECs may drain away a small amount of funds that the LEA has available for compensatory education services, but CECs might help LEAs avoid the larger cost of vans and other very expensive Felton solutions.

Question: How would a CEC be used in rural areas where there are no geographically convenient choices of schools and programs?

Answer: Any LEA or SEA would assess its particular local situation before implementing a CEC program. For some school districts, CECs may not be a practical alternative for meeting the special needs of educationally disadvantaged children. For this reason, our proposal leaves the choice of implementing such a program to the SEA or LEA.

Question: How would a school or school district plan for CEC use: for school transfers, staffing, after hour enrichment programs, loss of students outside the district, unexpected demographic shifts at school sites?

Answer: These are issues that local school officials face daily in the normal course of administering their schools. SEAs and LEAs would take these issues into consideration in the design and implementation of a compensatory education program that uses CECs.

QUESTIONS SUBMITTED BY SENATOR PAUL SIMON

ELEMENTARY AND SECONDARY EDUCATION

Question: You have recommended level funding for Chapter 2 which has been lauded by administrators for its flexibility. Do you have data on improvements in student performance results since the implementation of the currently configured Chapter 2? Has anything been lost in giving flexibility in exchange for goal-oriented student programs?

Answer: Chapter 2, while flexible by design, is very much a goal-oriented program. Chapter 2 funds are used in a variety of ways to improve elementary and secondary education. Chapter 2 funding per student is very small, however, and its direct impact on the educational performance of individual students cannot be isolated. Data are available on Chapter 2's contribution to educational improvement. In 1983, the Department contracted with SRI International for a national study of the implementation of Chapter 2 at the local level. The study defined an educational improvement-oriented activity as "any effort to upgrade equipment and materials, develop curricula or train staff, add to staff, innovate or experiment with instructional approaches and programs, or stimulate schoolwide coordination and planning." The study found that Chapter 2 has indeed contributed to educational improvement.

QUESTIONS SUBMITTED BY SENATOR PAUL SIMON

ELEMENTARY AND SECONDARY EDUCATION

Question: One reason you give for the proposed elimination of the Women's Educational Equity (WEEA) program is that it duplicates funding of other programs. What programs?

Answer: The WEEA program provides grants and contracts to public and private organizations and individuals to develop educational materials and projects to promote educational equity for women and girls. There are other programs that fund projects or provide grants to States to promote equal opportunity for women. For example, States and communities that wish to make sex equity a priority can use the Chapter 2 State Block Grant and the proposed Christa McAuliffe Teacher Training and Improvement State Grant for that purpose. The Fund for the Improvement of Postsecondary Education also funds a substantial number of projects that address educational opportunity for women, and the Office of Educational Research and Improvement had a substantial program of sex equity-related activities designed to help both females and males overcome sex stereotyping.

Outside of the Department, other agencies also have programs aimed at improving women's educational equity. The National Science Foundation's authorizing legislation was amended in 1980 "to increase substantially the contribution and advancement of women and minorities in scientific, professional and technical careers." NSF provides funds for continuing education programs for women who are in the workforce or whose careers have been interrupted. NSF also funds a program of visiting professorships for women which provides them with funding for research and "interactive activities." In addition, NSF grant announcements for materials development and research reflect a commitment to sex equity.

Finally, the National Endowment for the Humanities supports a variety of research and educational programs to advance scholarship and public understanding of the humanities. Projects with a focus on women or on educational equity may be supported under any of the Endowment's grant programs.

QUESTIONS SUBMMITTED BY SENATOR PAUL SIMON

VOCATIONAL EDUCATION

Question: Your budget proposes the total elimination of support for vocational education with the claim that for every $1 in Federal support, States spent $11. While this is true for many programs, vocational education in the areas of the disadvantaged and the handicapped is a $3 State to $1 Federal match. Do you think a 25 percent reduction in support for disadvantaged and handicapped vocational education will have no effect?

Answer: Virtually every school district in the country offers vocational education opportunities for students, but the Education Department share averages only $68 per student. This is a small fraction of the total per student expenditure for vocational education undertaken by States and localities, private industry, and the Labor Department. While the Federal share for the disadvantaged and the handicapped may be somewhat higher, it still amounts to less than 20 percent of the total vocational education dollars provided for these groups, according to 1985 State expenditure reports. Under our proposals, we anticipate that vocational education opportunities would continue to be available to virtually all of these students.

Training for the disadvantaged will continue to be available under the Job Training Partnership Act, administered by the Labor Department. The Administration's new initiative to improve the Summer Youth Program will allow states to expand their services to disadvantaged youth. Vocational education services would also continue to be available to the severely handicapped through the Vocational Rehabilitation State Grants program, which is funded at $1.3 billion in 1987, and serves approximately 924,000 physically and mentally disabled persons annually.

Question: Another supporting claim for elimination of vocational education is that the corporate sector already spends $30 to $40 billion in training. Close to 30 percent of this is in many basic educational and vocational skills and is often spent in school programs whose budgets you propose to cut. Are you aware of this partnership and the effect of cuts on those facilities used by the corporate sector--the currently funded vocational education programs?

While the corporate sector does expend funds on training, it is for those already employed. Vocational education is to train young people for their first jobs. Do you feel that putting the training burden totally on the private sector for those already employed is an equitable arrangement and will benefit young people who have had no vocational training and are seeking employment? Does your proposal limit training to those already in the workforce?

Answer: The Department of Education is a very minor actor in the total vocational education enterprise. State and local governments spend about $12 for every Education Department dollar spent on vocational education. We do not anticipate that the elimination of Federal support for vocational education will harm local school facilities, nor hinder the public sector/corporate partnership in vocational education. In fact, that partnership will be strengthened as States and localities continue to seek additional corporate support for vocational education. Corporations are clearly committed to do more, as demonstrated by the expanding number of Adopt-A-School programs, equipment donations, etc.

However, what the corporate sector wants most from its entry level work force is mastery of basic skills. To help meet this need our 1988 budget proposal would add $200 million to the Chapter One program, which is used by local educational agencies to enhance basic skills development.

Neither does our proposal place the entire burden of preparing young people for their first jobs on the corporate sector. Under our 1988 budget proposals, Federal student financial aid, including Guaranteed Student Loans and Pell Grants, will make over $13 billion available to students seeking education and training both prior to a first job and when making a career change. Approximately 20 percent of Pell Grants and a similarly substantial volume of Guaranteed Student Loans are made to students seeking vocational and occupational training from proprietary schools. In addition, nearly one-quarter of all Pell grants go to students attending 2-year public institutions, including community colleges, many of whom pursue some type of vocational education.

QUESTIONS SUBMITTED BY THE COMMITTEE

SPECIAL EDUCATION AND REHABILITATION PROGRAMS

Question: Last year Congress overwhelmingly approved and the President signed into law reauthorizations for the Rehabilitation Act and Education of the Handicapped Act. These include initiatives to meet needs that have been recognized by the Department of Education, as well as special educators and rehabilitation professionals. The Department's budget would cut current appropriations for these programs by 17% for special education and 9% for rehabilitation services. A major initiative, grants to States to ensure preschool services to all handicapped children ages 3 through 5, would be cut from $180 million to $78.9 million. Do you have any information to indicate that your recommended level of funding would provide sufficient incentive to ensure services to these preschoolers in all States? What is your estimate of presently unserved preschoolers? How does it compare with the number who would be served under your recommendation?

Answer: The 1987 revised request provides $300 for each handicapped preschooler, aged 3 through 5, served. This is almost 3 times the $110 each child received in 1986. We believe that this substantial increase will be a strong incentive for States to serve these children.

We estimate that approximately 72,000 preschoolers, aged 3 through 5, are not being served. Whether or not our proposed rescission is enacted in 1987, we do not anticipate substantial increases in the number of 3 through 5 year olds being served. From fiscal year 1985 to 1986, the EHA child count for 3 through 5 year olds increased by approximately 1,000 children. Allocations for fiscal year 1987 are based on the number of handicapped children aged 3 through 5 actually served as of December 1, 1986. We estimate that the number of handicapped 3 through 5 year olds served will increase by 2,000 this year. We estimate that a substantial increase of 22,000 will occur the following year, for which our 1988 request includes $300 per child. We do not expect all unserved children to be served until 1990 or 1991, when the mandate is in effect regardless of the level of funding for this program.

Question: Your budget includes no funding for the early childhood initiative for developing interagency programs of services to handicapped infants and toddlers. Studies, including those done by the Department, have indicated for a number of years that services at the earliest possible date are needed and cost effective. Since there is clear evidence that early childhood services reduce special education services required by many children when they reach school, what, specifically, has your Department done to develop a program to meet these needs or to address the issue of where such services will come?

Answer: The needs of handicapped children from birth through age 2 have been addressed primarily through priorities established under the Handicapped Children's Early Education Program. For example, for several years, the Department has focused on issues relating to these children through demonstration grants. Of the four priorities established for fiscal year 1987,

one supports projects dealing with severely handicapped or at risk children aged birth through 2, the second supports projects for in-service training for personnel providing services to these children, and the third supports projects for community involvement in the delivery of services for children from birth through age 5. Of the 2,742 children served in 88 demonstration projects during the 1985-86 school year, 62 percent were aged birth through 2. Under the Handicapped Children's Early Education Program State Grants provision, 45 planning grants were funded in the 1985-86 school year that dealt with statewide assessments of the needs of handicapped children from birth through 5 years of age. In addition, States could use their set-aside funds under the Preschool Grants Program to provide special education and related services to handicapped children from birth through 2 years of age. For fiscal year 1986, 28 States reported that they used a portion of their set-aside funds to provide services to children beginning at birth.

QUESTIONS SUBMITTED BY THE COMMITTEE

REHABILITATION SERVICES

Question: At current average costs per client, with the current level of appropriations, how many handicapped individuals will receive rehabilitation services through the rehabilitation state grants in FY 87? How many would be served at your recommended rescission level? What is your estimate of the number who would be rehabilitated at each of those levels?

Answer: We estimate that approximately 924,000 disabled persons would be served and approximately 223,000 disabled persons would be rehabilitated by the Vocational Rehabilitation State Grant program in 1987 at both the appropriated and rescission levels. The rescission level represents a 3.3 percent increase over the 1986 level to cover increased costs due to inflation.

Question: On November 26, Senator Kennedy and I wrote to you to request that the recommendations of a 1985 personnel classification audit of the Rehabilitation Services Commission (RSA) not be implemented. We were concerned that implementation of the recommendations for a downgrading of personnel, especially in light of the new amendments, would hamper the ablity of the RSA to keep and attract well qualified professionals. Although we have not received a response to that letter, I understand that the downgrading has been carried out at the RSA. Has this, in fact, been done? If so, please provide an explanation of this action in view of the statute's new requirement that you upgrade the numbers and professional qualifications of staff of the RSA. Please provide the number of staff who were downgraded, and indication of their previous and new grade levels.

Answer: The Rehabilitation Services Administration has downgraded 25 positions as a result of the findings of the 1985 personnel audit. All of these positions were occupied when the downgrading occurred. The results of the audit showed that grade levels assigned to these positions were not commensurate with the required responsibilities for these positions. RSA is making every effort to help employees who were downgraded to preserve their grade level by moving them to currently vacant positions as well as to positions which have recently been created in response to the newly mandated requirements of the Rehabilitation Act Amendments of 1986. RSA intends to upgrade both the numbers and professional qualifications of its staff by hiring an additional 12 staff to carry out the new requirements of the Act as well as filling currently vacant positions. In total, recruitment efforts are underway for 31 positions in RSA. The following chart shows the number of positions that that were downgraded and the previous and new grade level for each position.

Number of positions	Previous Grade	New Grade
7	GS 15	GS 14
5	GS 14	GS 13
1	GS 14	GS 12
3	GS 13	GS 12
1	GS 13	GS 11
1	GS 11	GS 6
1	GS 9	GS 8
1	GS 9	GS 7
1	GS 9	GS 5
2	GS 7	GS 6
1	GS 7	GS 5
1	GS 6	GS 5

Question: Your response to another request for information on staffing indicates full-time equivalent (FTE) employees in OSERS were cut by 25% between 1981 and 1986. At the same time, appropriations for the programs administered by OSERS increased 34%. I am pleased to note that OSERS is now authorized to hire an additional 57 employees as soon as possible. What will the allocation of these slots be among the RSA, the Office of Special Education Programs, and the National Institute on Disability and Rehabilitation Research? How many will be within grades 11 through 15? How many are being targeted to provide technical assistance and program support for the rehabilitation state grant program?

Answer: The chart belows shows how OSERS would allocate the 57 positions among its offices and the number of positions in grades 11 through 15 for each office. Of the 57 positions, 30 are currently vacant and the remaining 27 are newly authorized positions. Four of these employees would provide technical assistance and program support for the Vocational Rehabilitation State Grant program.

Office	Number of Positions	Number of Positions 11-15
Rehabilitation Services Administration.....	31	17
Special Education Programs.....	16	12
National Institute on Disability and Rehabilitation Research.....	5	3
Office of the Assistant Secretary.....	5	2
Total.....	57	34

Question: What is your travel budget for the program monitoring and technical assistance responsibilities of OSERS in FY 87? What is the request for FY 88?

Answer: The 1987 travel budget for OSERS is $350,000, about five percent more than the Department's 1987 budget request of $335,000. Additional funds are needed in 1988 to cover newly mandated requirements for program monitoring.

The CHAIRMAN. Thank you very much.

Our next witness is a very important witness, Shin Murakami, who is a Japanese high school student. We are glad he is here today. There has been a great deal of discussion about education in Japan and the United States. It is interesting to hear from a student such as yourself, who has been in school in both countries.

Shin went to school in Japan from age six to ten; he has been in the United states from second through fifth grade, and eleventh and twelfth. So he was in the United States, then Japan, and then in the United States. He has had a very interesting educational experience. There has been a great deal of attention given to where we are as a country where Japan is, and where other countries are—not that what happens in other countries necessarily ought to be replicated here. But I think all of us can always learn from other people's experience in trying to apply some of the worthwhile and useful benefits of a program to see how they may or may not be suited to our own situation.

There have been many studies done, but we are very fortunate to have you here this morning. You are very good to come.

Are you missing school today?

Mr. MURAKAMI. Yes, I am.

The CHAIRMAN. You are. [Laughter.]

We met downstairs some of the guests that you brought with you. Do you have some of your teachers?

Mr. MURAKAMI. No; just my mother. There are some graduate students with Mr. Long.

The CHAIRMAN. Well, they are all very welcome here, too.

We are delighted to have you, and we hope you feel at home. We are very appreciative of your presence here.

STATEMENT OF SHIN MURAKAMI, STUDENT, WINSTON CHURCHILL HIGH SCHOOL, POTOMAC, MD

Mr. MURAKAMI. Thank you.

Mr. Chairman, members of the Committee on Labor and Human Resources, I am Shin Murakami, a twelfth-grade student who has been educated both in the United States and Japan. When I was in Japan, I attended Tamagawa Gakuen High School, located in Tokyo. Presently, I attend Winston Churchill High School, located in Potomac, Maryland. I am here today to share some of my observations about being a student in both the United States and Japan.

Being a student in Japan was quite different from being a student in the U.S. School would begin at 7:55 in the morning and go on until about 3:00. After this, every day of the school year, the students would clean the school. After cleaning the school, I would have basketball practice for two to three hours. The goal was to learn the discipline of the sport and not necessarily to enjoy it.

I believe that discipline plays a large role in Japanese society. Each evening, after two or three hours of after school activities and dinner, I would rush off to Juku, which is commonly known as "cram school" in the U.S. This is a private school which deals with only the academic courses. After about two hours of Juku, I would come home and at about 10:00 I would start my homework.

Juku is a very important part for any student who is preparing for the high school examinations.

The formal homework assignment which I would start at 10:00 was only a small part of what was required of me. Other than the homework, I would have to review the entire day's work, and I would have to preview the next day's assignments.

In Japan there is no getting out of being prepared or reviewing if you are to succeed.

Science and mathematics, I believe, are much more demanding in Japan. For instance, if you are taking a math course in the U.S., and you feel that you cannot keep up with it, then you would simply drop the course and take an easier course. In Japan, you are required to take the same mathematics course as anybody else in your grade. The pressure to succeed is very high. Some of my friends have been very confused as to how to handle their failure and its pressures.

Writing instruction is also demanding. In Winston Churchill High School, my teacher stresses writing creatively, creative writing; whereas in Japan, they would emphasize more on punctuation or grammar. Reading class in Japanese school would require more memorization—for example, short poems or important passages. The reason for this would be because they would often appear in entrance examinations.

In America, I am tested on what I thought about a certain poem or a certain passage.

The teachers in Japan are treated with a higher degree of respect than in the U.S. Each day, we would bow and greet our teachers before class or in the halls. In Japan I was thinking of becoming a teacher. Now, in the U.S., I do not think I want to become a teacher.

In American schools, I have learned to use my mind creatively. I feel that I am an individual here, with choices not only of what I wear to school, but what kind of courses I take. For instance, I am taking a business law class because I think it will help me to learn more about the law and conducting business.

Also in Winston Churchill High School, I have met more different kinds of people from other countries or different cultures.

Next year if I went back to Japan, I would need at least one and one-half years of school to be prepared to go to college. However, I am hoping to attend an American university and study business, because I think it is challenging and rewarding.

Thank you very much for this opportunity. I look forward to answering your questions.

The CHAIRMAN. Thank you very much. You are very good to come and appear here.

I understand that you enjoy the Winston Churchill School at the present time, do you not?

Mr. MURAKAMI. Yes, I do.

The CHAIRMAN. And you find that challenging.

Mr. MURAKAMI. Yes, I do.

The CHAIRMAN. I hear it is a first-rate school.

Can you elaborate a little bit on the attitudes, what you think are really the best in terms of what you have seen in your American experience, and maybe what is the weakest? Maybe we could

start with that, and then I will ask you the same question with regards to the Japanese experience and how you, as a young person, come out.

Let us start with the American experience, first. What do you find?

Mr. MURAKAMI. Well, I think people who are really going for the top, people who want a good education, have the same attitude as anybody else would in the world. But I believe that some people do not really care what is going to become of them from now.

In Japan, I believe everybody has the same attitude. You have a lot more competition around you because you must succeed. And there is a lot more pressure put upon the student. Also, I believe that the Japanese parents, especially the mother, gets a lot more involved in the child's activities in school and out, which helps the child to understand what he or she must do.

The CHAIRMAN. Could you elaborate on that point, about the parents becoming involved—I know your father helps you a good deal, too. Could you tell us a little bit about some of the parental involvement in education in Japan?

Mr. MURAKAMI. When the student comes home, in most families the mother would quickly put him to work, such as his homework, or he would have to go to Juku, and the mother helps him with his homework so that he fully understands the course so he can pass the course. Whereas in America, I do not think there is as much parental involvement with the student.

The CHAIRMAN. This to some extent is true about your father, as well, is it not?

Mr. MURAKAMI. Yes, it is.

The CHAIRMAN. Did he involve himself in the math and science?

Mr. MURAKAMI. My mother would have helped me if she could, but since she is an American, she was not able to help me in courses such as social studies or Japanese. And for the first couple of months, or half-year or so, my father helped me every Sunday for quite a long period on all the courses so I could keep up and catch up with the other students in the school.

The CHAIRMAN. That is wise advice from another society, I think, in terms of involving the parents in the education.

If you were to go on to college or a university in Japan, having graduated from high school—and I am just talking about any high school to the extent that you know about it—would you have to take additional courses, or would you have to have, so to speak, a beefing-up to gain entrance into a Japanese university?

Mr. MURAKAMI. At this point, even if I graduated Winston Churchill, I believe I would need at least another year and a half to prepare to go to college. That would primarily be because of my lack of Japanese ability at the moment since I have not been attending Japanese school; and of course, the social studies, but especially in the math and the science, I think I would probably be behind.

The CHAIRMAN. Let me ask finally, what do you think is the best part of the Japanese educational system and the part you would most question?

Mr. MURAKAMI. I think that the best part is that there is only one course that they offer in the major courses such as science,

social studies, English, Japanese and mathematics, which means that the students are all treated equal; they must pass the same course as any fellow student. Whereas in America, some people who cannot do as well as others would take an easier course. And I think that students all start from one, and if they all try as hard as they can, I think that they can all be just as good as one another. But if you have easier courses to offer, then the ones that do not want to work as hard are going to go down, and the ones who want to work harder are going to keep on going up.

The CHAIRMAN. Let me just ask two questions. Why is it that you would have wanted to be a teacher in Japan and not here?

Mr. MURAKAMI. First of all, in Japan, I have the English ability, pronunciation-wise, higher than most Japanese teachers. In Japan, everybody must take English, and I was often used as an example of how to read, for my pronunciation. The English teachers in Japan are not quite as good as I think they should be.

So one reason is that I could probably easily become an English teacher. Another reason is that they are highly respected in society. I think all the parents respect them; they get a lot of respect, and I think I would enjoy being a teacher.

The CHAIRMAN. Do you think that is important that the teacher have respect, from the students' point of view?

Mr. MURAKAMI. I think it is, because the students learn to respect their teachers and their elders, and I think that is one of the reasons for success in the Japanese educational system.

The CHAIRMAN. Senator Stafford?

Senator STAFFORD. Thank you, Mr. Chairman.

Shin, when you referred to the fact that everybody in Japan has to take mathematics and presumably, succeed, I am just asking this question because you also said that in this country you could take easier courses. We are not all exactly alike, and some people are better at mathematics than others, and others are better at studying the nation's literature or at beginning to lay a background for medicine or psychology.

I wonder if maybe the American system might be at least equally as good if it allows you to turn from mathematics to something that mentally, you are suited at doing much better than at mathematics. Could you comment on that?

Mr. MURAKAMI. Yes, I do think so. As I mentioned, I take a business law course because I am interested in that subject. And in that area, I think America really offers the student a choice of what he or she wants to do, and I think that is great.

But when asked why, maybe one of the reasons why the U.S. is lower, or not at as high right now in the world, I would have to answer that maybe that is one of the reasons, that you have easier alternatives to take.

Senator STAFFORD. Without prying into your personal life too much—and no further than you want us to—could I ask you what sort of grading system is used in Japan vis-a-vis this country and how you do in grades in both countries?

Mr. MURAKAMI. In Japan they go by 1, 2, 3, 4, 5—5 being an A, 4 being a B, and so on. I was able to barely get a 2 or a 3, which would be a C or a D, in most of my classes.

Senator STAFFORD. How do you do in this country?

Mr. MURAKAMI. I try to push myself and take the hard courses, so to say, and I get about a C or a B average.

Senator STAFFORD. Well, I certainly join the Chairman in thanking you for coming here today. I recall in the last Congress we had a Vietnamese student who was in this country's school system at the eleventh grade. And he said he was bored with some math courses he was taking here, and when we asked him why, he said it was because he had already taken those courses two years earlier in Vietnam.

So Japan may not be the only country that is forcing an intellectual development in mathematics and science, and quite strongly, at an early age.

Mr. MURAKAMI. Yes.

Senator STAFFORD. Thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Harkin?

Senator HARKIN. Thank you, Mr. Chairman.

Shin, I think that is very interesting. I just want to ask you a couple of questions about the Jukus. Jukus are private tutoring are they not?

Mr. MURAKAMI. That is correct.

Senator HARKIN. Japanese students who go to Juku in the evening—that costs money, does it not?

Mr. MURAKAMI. Yes, that would.

Senator HARKIN. Not all Japanese students go to Juku, do they?

Mr. MURAKAMI. Not all.

Senator HARKIN. Those who come from families who can afford it go, don't they?

Mr. MURAKAMI. Yes, I would guess that would be the case.

Senator HARKIN. Would that be the case?

Mr. MURAKAMI. Right.

Senator HARKIN. The question I have is, if the Japanese educational system is so good, why is it necessary for students to have private tutoring in the evenings, and again, students that do tend to be those from higher income families. They have a leg up in the schools because of the private tutoring that they receive. Is that basically true?

Mr. MURAKAMI. Yes, it could be. All I know as a student is that without the Juku, I definitely would not be able to go to a good high school. Just with the educational system, if you worked hard, you could get into any school that you wanted to get into—if you worked harder than anybody else. That would mean even if you are not going to Juku, you would have to study that much more at home. A lot of kids have their parents help them, like I said, which would be something that would take the Juku's place.

I know a lot of kids, my friends, who have gotten into good schools without going to Juku. ín my case, I had to be pushed by somebody because my father works and, like I said, my mother could not help me as much as my friends. And that is the reason I went to Juku.

I think, thought that 60 or 70 percent of students probably do go to Juku, and you learn a lot more material there, and you learn a lot of things that come out on the high school entrance examination. Getting into a good high school is sort of like a ticket to suc-

cess in Japan. The better the high school, the better the college you get into, and the better the college, the name, in the country, you get into a better business.

Senator HARKIN. Could you just talk a little bit from your own background about the difference between the physical facilities, schools? What are the schools physically like in Japan, compared to the Potomac high school that you go to, Winston Churchill? How do they differ?

Mr. MURAKAMI. I do not see much of a difference. I think in America, you have a lot more playground area for different kinds of sports. That is probably because of the land situation. You do not have rugs and so on inside the school in America, which I had in my elementary school.

Senator HARKIN. I ask that because I lived in Japan for a year and a half, and I did visit quite a few schools, and it seemed to me that the physical facilities were much starker—I do not want to say less nice, but there was just a building, and there were rooms, and there were blackboards, and of course there were laboratories and things like that, too—but that not a lot of emphasis was put on the niceties and appearances and things like that.

Mr. MURAKAMI. No.

Senator HARKIN. I had a question about the grading, but you answered that.

I think that there is a lot we can learn from the Japanese educational system and a lot that we can adopt in terms of discipline and respect, and emphasis on certain items. But I think you really hit upon the key thing on why I am basically proud of the American system of education. It is universal. As you point out, it involves people from different races and cultures and puts them all together, teaches everyone, teaches them how to live together—plus, it teaches our kids how to think creatively. I think you really hit on it, and I appreciate it.

In my conversations with my Japanese friends, that is the one thing they always point out is that the Japanese are taught the mathematics, they are taught the sciences, but it is the creative part that they say that they are lacking, and that is what we do so well in this country. I think that is really the strongest part of our educational system.

Mr. MURAKAMI. One thing I would like to say about that is that although the Japanese do not stress creative writing or creativity, for some reason or another, the Japanese have a lot of creativeness—as you can see if you have seen Japanese paintings or drawings that the Japanese have drawn, or anything, even after they get into business—the Walkman, the Watchman. Where they come up with these ideas, I would not really know, but I think they are very creative. Maybe it is something they are born with. So that could be one reason the Japanese do not stress creativity; they learn by themselves, somehow or another.

Senator HARKIN. Thank you very much.

Mr. MURAKAMI. Thank you.

The CHAIRMAN. Shin, we were talking about tutorial schools. They have quite a tradition here in this country, too. Manter Hall used to be a great support school up at Harvard, particularly before the war, but it still exists rudimentarily. That was available

to students both at Harvard and MIT—which, as you may have heard, are two of our good universities.

Now there are increasing numbers of schools for young people who are taking the SATs. I saw that in a personal way; my son took the test and then went back and took one of these courses, which was just done over Christmas-time for a period of about ten days, and had a significant increase—close to 100 points in the reading area, and about 40 points in math. I do not know whether that says something about him or something about the test. And now they are taking a prime for the law aptitude test, which they did not do when I was taking the law aptitude, and I think all law graduates are familiar with the bar review course that most of us were involved in, for the most part, before taking the bar exam in our own State.

So this has a tradition. It is perhaps not as elaborate or involved as it is in Japan, but it is something that exists here.

I want to thank you very, very much for your very helpful and very interesting testimony. We are grateful to you and wish you the best luck in whatever career you choose.

Mr. MURAKAMI. Thank you.

The CHAIRMAN. Thank you very much.

Our next panel includes Paul Barton, the Associate Director of the National Assessment of Educational Progress, who will speak to us about the report on "Literacy: Profiles of America's Young Adults"; and Lewis Branscomb, former Vice President of IBM, Director of Science, Technology and Public Policy Program at the John F. Kennedy School of Government, with a report on "A Nation Prepared: Teachers for the 21st Century" from the Carnegie Forum on Education and the Economy.

We are glad to have Mr. Branscomb back. He used to come and appear years ago when I used to be Chairman of the National Science Foundation and talk to us about Science and Education at the NSF. So he has been appearing before these committees for almost as many years as I have been on them.

Mr. Barton, we know you have been enormously helpful to all of us in this area.

We will ask Mr. Barton if you will be good enough to begin. I will be absent for about three minutes during the course of this presentation. I just want to mention that to the witnesses. I just got an unavoidable call, and I will ask Senator Harkin to preside while I am gone. But I will be right back.

Mr. Barton, please proceed.

STATEMENT OF PAUL E. BARTON, ASSOCIATE DIRECTOR, NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS, EDUCATIONAL TESTING SERVICE; AND DR. LEWIS BRANSCOMB, FORMER VICE PRESIDENT, IBM, AND DIRECTOR, SCIENCE, TECHNOLOGY AND PUBLIC POLICY PROGRAM, JOHN F. KENNEDY SCHOOL OF GOVERNMENT, HARVARD UNIVERSITY, CAMBRIDGE, MA

Mr. BARTON. Thank you, Mr. Chairman.

Mr. Chairman and members of the Committee, high proportions of young adults have quite limited literacy skills, although most

are able to read. This is the conclusion of a study by the Nation's Report Card, of young adults aged 21 to 25, conducted in 3,600 households across the country, with the report released last September.

Only 2 percent in this assessment, when we went into these households, were judged not able to read well enough to be able to take the test at all. The rest were given a 90-minute assessment using tasks that simulate real life problems and situations in the areas of work, community and the family. They not only had to read the text; they had to perform the tasks the text described.

Three literacy scales were developed to measure literacy—the first, a prose scale; the second, a document scale, involving documents frequently encountered such as bus schedules or payroll forms, and the third was a quantitative scale. Scores on these proficiency scales ranged from zero to 500.

This study profiles literacy skills using these scales; it does not attempt to divide the population into just two groups—those arbitrarily judged to be wholly illiterate and those judged to be literate—as past studies have generally done.

The results. Practically all reached the 200 level on these scales, which means that they are able to use printed information to accomplish tasks that are routine or uncomplicated. With prose, this means that they can do tasks such as writing a simple description of a job they would like to have. With documents, it means that they can do such things as enter personal background information onto a job application. On quantitative, it means they can do tasks such as total two entries on a bank deposit slip. Practically all of our young adults can do these things.

And, while we can take solace in this finding, we have to be concerned that literacy skills are so limited. Relatively small proportions are proficient at levels characterized by the moderately complex tasks.

For example, just over one in three perform at the 325 level, illustrated by a task such as locating information which is repeated in a lengthy newspaper article. Only one in five perform at the level characterized by the task of interpreting a bus schedule where one transfer is involved. Just under two in five are at the level where a typical task requires examining a menu which the person is given, to compute the cost of a meal they are specified to order and determine what change is owed them by the waiter or the waitress. And only one in ten were at the level required to add to that figure the exact amount of a 10 percent tip.

There are disproportionately large differences by racial and ethnic subgroups, as described in my written testimony. School dropouts perform more poorly than those who graduate; the more years of schooling, the higher the literacy level.

Mr. Chairman, this study measures what young adults know and what they can do. It does not measure what they need to be able to do to succeed in life, or what the economy needs of them.

Different people and institutions can examine these profiles and make their own judgments about deficiencies and goals. We have recently reported the results of assessments of reading and writing—I have so far just talked about young adults age 21 to 25—

reading and writing among 9-, 13-, and 17-year-old students. I will just briefly summarize those results.

Writing performance was basically level from 1974 to 1984, dipping at mid-decade and then recovering to where we were. Based on the 1984 writing assessment, we conclude that although students can write at a minimal level, they generally cannot express themselves sufficiently well to be understood. Most students, majority and minority alike, are unable to write adequately except on the simplest tasks, despite a recent national focus on writing instruction in the schools.

On reading, we have better news. Students were better readers in 1984 than in 1971, and the gap between black and Hispanic students and white students narrowed somewhat during that period of time. While virtually all can read basic material, there is reason for concern about the insufficient development of higher-order reading skills.

In summary, Mr. Chairman, the assessments are showing that most are reaching the minimums, but that too few are achieving the intermediate and higher skill levels increasingly required to achieve personal success and maintain national prosperity.

Thank you.

[The prepared statement of Mr. Barton follows:]

Testimony Before the Senate Committee on

Labor and Human Resources, January 14, 1987

Paul E. Barton*

Mr. Chairman and members of the Committee: It is a pleasure to have the opportunity to convey what the Nation's Report Card has learned about the literacy profiles of young adults...aged 21-25...from a household assessment conducted in 1985. The "Report Card" is a project ongoing since 1969, mandated by Congress as the National Assessment of Educational Progress, funded by the Department of Education's Center for Statistics, and currently administered by Educational Testing Service.

To make my summary more easily understood I will briefly describe the nature of the study reported in Literacy: Profiles of America's Young Adults, and released last fall, for it may differ significantly from other studies you may have read, and numbers you may have heard.

First, it recognizes that there is no single cut-point that separates those who are fully literate for our society from those who are totally illiterate; instead, there is a continuum of literacy skills and this has led us to "profile" literacy skills rather than publish a single number of "illiterates," as previous studies have done. It would be inaccurate to do so, and not terribly useful for developing solutions.

Second, we have chosen to profile literacy in three areas, rather than as a single construct:

-- Prose Literacy: reading and interpreting prose, as in newspaper articles, magazines, and books;

* Associate Director, National Assessment of Educational Progress, Educational Testing Service. Views here expressed do not necessarily represent those of the funding agency.

-- Document Literacy: identifying and using information located in documents such as forms, tables, charts, and indexes; and,

-- Quantitative Literacy: applying numerical operations to information contained in printed material such as a menu, a checkbook, or an advertisement.

Third, we went beyond the traditional approach of just asking questions and reporting the average percent of correct answers. Using psychometric technology, proficiency scales were created that range from 0 to 500, for each of the three aspects of literacy. At points along the scale, proficiency levels are illustrated with tasks that people who score at that level are likely to be able to perform. Such a scale enables comparisons among subgroups, allows us to relate proficiency to other information collected about the young adults (30 minutes of the assessment went for background questions), and will enable accurate comparisons over time if the survey is repeated.

Fourth, knowing that some young adults would not be able to take the assessment because they could not read well enough to attempt the tasks, or could not read in English, we used a screening measure. Those who did correctly answer at least 3 out of 7 items were given an assessment aimed at measuring their competence in using spoken English. Their oral responses were tape recorded and scored by people trained to do so.

For the young adult population as a whole, the principal conclusions were these:

- o Just two percent were judged to read so poorly that they could not take the assessment. They were given the oral assessment on which they performed significantly less well than the population in general.* Therefore, people who cannot read do not make up for it with oral abilities that substitute for reading.
- o The overwhelming majority of America's young adults are able to use printed information to accomplish tasks that are routine or uncomplicated. Below, results for the 200 scale level are presented.
  - -- For Prose Literacy, 96 percent performed at least at the 200 level on a scale of 0 to 500. One task characteristic of performance at this level is writing a simple description of the type of job one would like to have (199). Another is accurately locating a single piece of information from a newspaper article of moderate length (210).
  - -- For Document Literacy, 96 percent performed at least at the 200 level. One characteristic task directs the reader to match money-saving coupons to a shopping list of several items (211). Another task involves entering personal background information on a job application (196).
  - -- For Quantitative Literacy, 92 percent performed at least at the 225 level. The task that best typifies this level requires totaling two entries on a bank deposit slip (233). (96 percent are estimated to reach the 200 level; no task examples qualified to illustrate this level).

* To make this comparison, a subsample of all 21-25 year-olds were also given an oral assessment.

- o While we can take some solace in the finding that almost all perform at these basic levels, literacy skills seem to us to be distressingly limited: relatively small proportions of young adults are proficient at levels characterized by the more moderate or relatively complex tasks.
  - -- For Prose Literacy, just 37 percent performed at the 325 level. A representative task at this level required locating information on the basis of three features that are repeated throughout a lengthy news article.
  - -- For Document Literacy, only 20 percent are estimated to be at or above the 350 level, where they are likely to be able to do tasks such as figuring out, from a bus schedule, the time, on a Saturday morning, when the second bus arrives at the Downtown Terminal (334).
  - -- For Quantitative Literacy, just 38 percent are estimated to be at or above the 325 level, where a typical task requires the reader to examine a menu to compute the cost of a specified meal and to determine the correct change from a specified amount (337). (Only about 23 percent were at the 350 level where performance included figuring the exact amount of a 10 percent tip).

The above is gleaned from examining just two levels on each of the three scales. Anyone can look at representative tasks at different proficiency levels and make their judgments about what proportions are ill-prepared for life's success. The level of literacy needed by any individual depends on

the demands individuals face in different life areas...of work, home, and community. And within those areas the questions become: What job? Doing what in the home? Doing what in the community? The NAEP study has measured what young adults can do; it has not measured what different settings require of them. For example, fewer than one in ten are at the proficiency level (375) represented by the task of estimating cost using grocery store unit price labels. Is that acceptable? Is that a failure during the school years?

As might be expected, proficiency levels vary considerably among the subgroups of young adults, and the study pinpoints where problems are most severe.

- o Black young adults, on average, perform significantly below White young adults, with Hispanic young adults performing mid-way between.
  - -- Eighty-six percent of Black, 94 percent of Hispanic, and 98 percent of White young adults perform at least at the 200 level on the Prose Literacy Scale.
  - -- Eleven percent of Black, 24 percent of Hispanic, and 43 percent of White young adults perform at or above the 325 level on this scale.
- o The longer the time spent in school, the higher the literacy proficiency. Again, using the prose scale:
  - -- At or above the 200 level are 71 percent of those with 8 or less years of school, 88 percent high school dropouts, and 97 percent with a high school diploma or some postsecondary education.

-- At or above the 325 level are 0 percent of those with 8 or less years of school, 10 percent of high school dropouts, 27 percent with a high school diploma or some postsecondary education, and 63 percent with a postsecondary degree.

While using simple print for routine tasks is within the grasp of most young adults, literacy skills remain an unreached potential for a large proportion. This is an important finding for programmatic efforts aimed at improvement. The deficiency identified here is in dealing with the more complex tasks embedded in print materials: Evidently, the printed word usually can be decoded, but the information obtained is not processed correctly to solve the problem. The authors of the report, Irwin Kirsch and Ann Jungeblut suggest what this implies for corrective action:

> "Should we seek better ways to teach the current curriculum or do we need to reconsider what is taught and how we teach it? Adult literacy programs aimed at developing comprehension skills are frequently based on elementary school reading models that, for the most part, are restricted to the use of narrative texts. Results from this and other studies suggest that primary emphases on a single aspect of literacy may not lead to the acquisition of the complex information processing skills and strategies needed to cope successfully with the broad array of tasks adults face...
>
> Adult literacy programs that tend to focus on the acquisition of skills associated with discrete tasks, such

as filling out a job application form or using a bus schedule, may have limited impact for the individual. This is so because, while literacy is not a single skill suited to all types of texts, neither is it an infinite number of isolated skills each associated with a given type of text or document."

Much of this brief summary has been of national averages. Those who deal with specific problems deal with specific groups. The fall report addresses the literacy of a number of subgroups, and factors in family and personal backgrounds that affect literacy skills.

Those concerned about high school dropouts find the reasons for their concerns confirmed.

Those concerned about divergences in literacy skills among racial and ethnic subgroups find in these results a measure of the distance yet to go.

Those concerned about whether workers displaced from their jobs have sufficient literacy skills to retrain for new ones will find cause for their concern.

Those who ask whether continued schooling makes a difference in ability to deal with more complex information processing requirements will find that it does...as years of schooling increase so do literacy skills.

Those concerned about our competitive position in the world economy will not be reassured about the thinness of the ranks at the higher range of these literacy scales.

We hope that those who deal directly with attempting to improve literacy skills will find practical use from these results in fashioning instructional

programs. In late January, the Center administering NAEP will release an in-depth analysis of these findings by three outside experts in a report titled The Subtle Danger: Reflections on the Literacy Abilities of America's Young Adults. In February, NAEP will report the results of a synthesis of the student reading, student writing, and young adult literacy assessments, in a report titled Learning to be Literate in America: Reading, Writing, and Reasoning.

We will know what progress we are making in improving literacy skills when we commit to assessing adult literacy on a regular basis, using consistent methods; our recent history has been one of sporadic, over-simplified, and unrelated studies.

Since we do regularly assess in-school 9-, 13-, and 17-year-olds, you may wonder whether we are gaining or losing ground in learning to be literate.

- o For writing, NAEP reported last April, in the report Writing, Trends Across the Decade, 1974-84, that performance was basically level, dipping at mid-decade, and then recovering to 1974 levels.
- o In The Writing Report Card, released last month, NAEP reported in detail on the levels of writing performance, and how performance related to instructional practices. It was not encouraging: The report's authors summarized as follows:
  - — Although America's youth can write at a minimal level, they cannot express themselves sufficiently well to make themselves understood.
  - — Most American students, majority and minority alike, are unable to write adequately except on the simplest of tasks--despite a recent national focus on writing instruction in schools.

- o For reading performance, the assessments have produced more encouraging news. In the fall of 1985, NAEP released its Reading Report Card, reporting that students in 1984 were better readers than students of the same age in 1971. Virtually all 13- and 17-year-old students can read basic material, and 84 percent of the 17-year-olds still in school have acquired the intermediate skills and strategies necessary to handle relatively lengthy reading passages. Further, the gap between Black and Hispanic students, and White students, narrowed somewhat from 1971 to 1984. The report expressed concern over the insufficient development of higher order reading skills, however.

In summary, Mr. Chairman, NAEP assessments are showing that most are mastering the basics and reaching the minimums, but that too few are achieving higher level skills increasingly required to achieve personal success and national prosperity. I appreciate the invitation of the committee to describe what the NAEP has learned in recent assessments of literacy skills.

The CHAIRMAN. Dr. Branscomb?

Dr. BRANSCOMB. The goal for American education must be to prepare all our citizens to respond to the challenges the 21st century will bring. Not only must they be able to create a competent, competitive and caring society, but they must be capable of creating change to shape a better world.

This requires a substantially different kind of education than most of our public schools can provide, in which young people learn to think for a living, understand and solve problems, find or create new information.

Education must equip all our citizens with the knowledge of their shared heritage and culture, prepare them for self-government, and give them the mental tools that are necessary for sustained employment in the information age.

During the next five decades, the U.S. workforce is expected to grow by over 30 million workers; but the number of white males in the workforce is expected to remain unchanged. Our society must assimilate and educate a great many people, no doubt talented, but with diverse cultural and language backgrounds, and in many cases with very limited economic means.

At the same time, if our society is to maintain its quality of life and still play a leading, constructive role in world affairs, our people must be educated to bring added value to their jobs, so that American goods and services can be internationally competitive. The technology to permit the needed productivity growth has been invented primarily in America. Today, we are seeing other nations put that technology to work in well-managed enterprises with well-educated, very dedicated workforces.

How can American enterprise be expected to compete if our pre-college education industry, the most strategic industry in the information age, is itself not competitive?

Educational standards have been tightened, especially since the publication of "A Nation at Risk", but the best schools of the 1950s are not good enough for 2000. Our communities are trying to tighten curriculums and demand more of teachers and students, in a system whose incentive structure looks like a public utility—the price goes up as satisfaction with the product goes down.

What is needed is a revolution in education, one that places clear responsibility on communities for the goals of education, but on teachers for educating.

The Carnegie Forum for Education and the Economy, whose Task Force on Teaching as a Profession I chaired last year, has stimulated in many States plans for radical restructuring of the educational system. This restructuring would change the way future teachers are taught, how professional competence in teaching is recognized, teacher compensation and other incentives, the structure of professional jobs within the school, the way schools are run, the accountability of teachers and administrators for results, and a priority focus on action to reverse the decline in interest in teaching, especially among minority students.

This agenda was endorsed without dissent by the National Governors Association last August. Governors, educators, teachers' associations, business leaders, and other citizens are working togeth-

er in many States to put into action this second wave of school reform.

Governors seem to be more successful than political leaders at the national level in convincing voters that safeguarding jobs in their States depends on three strategies: a good climate for business investment, encouragement to higher education and research activity, and a major commitment to reform public education.

But the federal government does have a major role to play in support of these State efforts, especially in addressing educational inequities from State to State, increasing the supply of academically qualified teachers, especially of minority teachers, and facilitating the mobility of teachers State to State. The federal government also must help the states address special problems in science and math education, affecting over $50 billion of Federal investment as well as the competitiveness of the civil economy. Federal help is also needed for the retraining of the workforce in a fast-changing industrial structure.

It is right that States should take the lead in education reform. It is wrong for the Federal government to content itself with the role of critic from the sidelines. The President has frequently called on the private sector to take initiative, and many companies have done that. It is now time for each sector of government to be accountable for repairing the serious inadequacies in our educational system, just as we are expecting teachers to be accountable for the quality of education in their schools.

I hope this Committee will turn to action plans for cooperating with these very important State and private initiatives.

Thank you.

[The prepared statement of Mr. Branscomb follows:]

74-573 0 - 87 - 3

TESTIMONY BEFORE THE SENATE COMMITTEE
ON LABOR AND HUMAN SERVICES

Jan. 14, 1987

Lewis M. Branscomb
J.F. Kennedy School of Government
Harvard University
Cambridge MA 02138

It is a great pleasure for me to appear again before this committee to discuss the subject of education in America. On previous occasions I have appeared in behalf of my responsibilities in government, for the National Bureau of Standards or the National Science Board, or as a scientist with experience in industry as Chief Scientist of the IBM Corporation. Today I speak from an academic vantage point, having recently retired from IBM to join the faculty of a school of government which bears proudly the Kennedy name. There I head the school's program on Science, Technology and Public Policy.

Any discussion of national goals for America must reflect both our history, culture and self-image and a realistic assessment of changing world circumstances. We Americans pride ourselves on the ability not only to adapt to change, but to create it. We view ourselves as a creative, practical, industrious and generous people. We are quite unwilling to accept as inevitable a long term decline in the quality of American life, or an abrogation of our collective responsibilities to make this a better world for everyone.

For forty years, since America emerged victorious and largely undamaged from World War II, most Americans have taken our long term economic prospects for granted. Even today, with a massive trade deficit and reversal of our credit position from lender to debtor, many economists will tell us we do not have a competitiveness problem; we simply have to accept the readjustments dictated by the realities of the marketplace.

As a scientist, I am not looking for a quarrel with economists; let us hope they are right. In any case those market realities do protect our people to some degree from losses of industrial leadership, as the new leaders acquire a growing equity interest in the lagging U.S. firms. And that trend is not all bad news either. Presumably the new owners can teach us the skills that made them winners in world competition.

What does concern me, and many other peopled who are close to the American technology scene, is the growing

evidence that Americans are failing to take full advantage of the changes in the world economy that our own innovations have brought about. And reversing this trend may not be just a matter of "getting our act together", so to speak. The educational system that empowers Americans to succeed in the emerging global economy is, in my view, simply not up to the task.

In the new knowledge-intensive economy, which we Americans largely created, our performance in many areas seriously lags our potential, and lags the capabilities of other societies much newer to the game.

What are those changes, and in what sense are we failing, or threatened with potential failure in the future?

Drawing on natural talent for innovation and new business creation, and taking advantage of the best system of research universities in the world and generous federal sponsorship of research, Americans built an information industry and a tradition for research based-progress in productivity that is the envy of the world. The new technologies make possible smarter tools, better materials and new processes that enable smart people to produce more with less effort and cost.

These same technologies are also creating a global marketplace in which adaptation of products and services to local requirements can be accomplished without loss of scale economies. A vertically integrated business can be conducted in dispersed locations, thereby increasing efficiency and greatly enhancing the value an open system of international trade.

Let me give you an example from the manufacturing sector. The global information system allows much better knowledge of local market requirements from any other vantage point in the world. Computer aided designs (CAD) can be electronically communicated to and integrated in different Computer Integrated Manufacturing (CIM) facilities, whose automated production control assures that the assembly of parts in yet other locations will produce highly reliable and low cost products. Even the servicing of many new products can be accomplished remotely by computer interrogation via communications.

The same thing is happening in services, for example banking, investments, insurance, and the media. A global capital market is emerging, which further encourages horizontal organization of industrial activity.

In the emerging global marketplace with these new capabilities for horizontal integration, every nation sees new opportunities for participation, especially those around

the Pacific Rim. Should we Americans expect to be victims or the main beneficiaries?

I submit that our education and research system, together with our people's traditional creative talents created these possibilities, and we should continue to be the leaders. With our large domestic market and our global economic participation we have the most advantageous position and have the most to gain by basing our economic future on thinking for a living. Indeed, we have no choice, if we wish to sustain a high standard of living and also bear the heaviest burden for the defense of the free world.

The same trends that make working smarter the key ingredient for commercial success make a smarter military key to our national security. If we do not want to match the Soviet Bloc man for man and gun for gun, we must have a qualitatively superior military. This requires forces who can handle more complex weapons and follow strategies that require better information used in more sophisticated ways.

That is our national strategy, yet today the U.S. military are downgrading documentation to fit the limited cognitive skills of their recruits. Senator Nunn became so concerned about the impact of inadequate pre-service education for Signal Corps recruits he took the lead, with Harry Gray and others from private industry, to create a major program to bring new educational technology to the public schools of America. Admiral Watkins, the Chief of Naval Operations, is equally concerned about the dependence of our navy on a more educationally capable sailor than our schools provide today.

Economic analysis may not give quantitative measures of the dependency of future economic success on education. But circumstantial evidence is at every hand. U.S. corporations spend on the training and reeducation of their own employees about two thirds as much as the entire bill for K-12 public schools. The IBM Corporation, for example, invested almost $2 Billion in 1985 on employee education and training.

Second, it is a mistake to assume that overseas competitors owe their success only to to lower wage scales. South Korea is an interesting case. To be sure their annual industrial wage is about $3000, and their "work ethic" puts not only ours, but the Japanese to shame. But Koreans value education as highly as they do hard work. That dedication to education enables them to import technology from abroad and very quickly master it. Among over 125 IBM subsidiaries around the world, which do you think has the most highly educated workforce? Ninety-one percent of the employees of IBM Korea were educated beyond high school.

I do not suggest we take as our goal for public education to emulate foreign school systems. Our schools are very diverse; the best are unmatched anywhere in the world. In any case, our schools must do more than train people to compete in a changing world. Our schools must also help young people appreciate our values, share our culture and prepare them for self government.

Where some foreign school systems are out performing many of ours is in the standards set by curriculum and the discipline (from both school and parents) associated with mastery of the material. Much of the education reform movement of recent years has been aimed at increasing standards in the schools. But the education of the 1950s, even when offered under tightened standards, is not good enough to prepare young people for the kind of jobs that over opportunities in the next century.

This view is shared by the members of the Carnegie Task Force on Teaching as a Profession, which I chaired last year. Our report: A Nation Prepared; Teachers for the Twenty-first Century has reshaped the agenda for the debate about reform of American education.

The Carnegie Forum on Education and the Economy, which launched this project in the spring of 1985 was established by David Hamburg and the trustees of the Carnegie Corporation of New York. The Executive Director of the forum, and primary author of the Task Force report, is Marc Tucker, an expert in the field of public education who combines vision and imagination with intimate knowledge of the issues and players in American education.

Let me make some summary remarks about the Carnegie Plan. I offer for the record an address I made to the Forum in San Diego last May which summarizes the taskforce proposal more completely.

First, it is a proposal for action, not just another view-with-alarm report. It is specific enough to permit states and communities to move ahead, flexible enough to accommodate the many special circumstances found in different states. Its proposals are admittedly radical, and they are all interdependent and must be viewed as a systems solution.

I will not address either in-service retraining of employed workers, a matter of prime importance to successful industrial restructuring, nor higher education, except as it relates to teacher training. But we should all realize that goals for American education must embrace the entire system for life-long learning, at all levels of education, in a consistent manner. That is a very major task, but an important one.

But I believe the education community, while leery of many reform proposals, is ready to adopt sweeping change if everyone participates in the process. And nothing we propose is entirely new; each element has been successfully demonstrated.

Our plan is based on the conclusion that teachers are the solution, not the problem: teachers who are well educated, working as professionals under proper incentives in schools that encourage them to take more responsibility for educational results.

The changes we propose affect

* the education colleges and universities offer future teachers,

* the way teachers recognize the professional standing of their peers,

* the compensation system and other incentives under which teachers work,

* the structure of professional jobs within the schools,

* the way schools are run,

* the way teachers administrators are held accountable for educational results, and - most important:

* the need for strong action to reverse the decline in interest in teaching careers, especially among minority students.

We advocate deregulation of the schools but not privitization. We know that such schools can not only release creative energies in teachers, but will enhance the opportunities for leadership by principals, superintendents and school boards as more authority is delegated by the state and the schools become more innovative and productive.

My confidence that action will result is based on overwhelmingly favorable media reaction, strong public support demonstrated by the Harris poll, endorsement by Governors, and support by many education groups. I also draw confidence from the unanimity achieved within our task force, which was a Noah's ark of stake holders in education: governors, union leaders, minority leaders, state education chiefs, business and teacher education leaders.

Instead I want to call to the committee's attention some very important issues that will shape the outcome of this second wave of educational reform, following the raising of

citizen concerns in the report A Nation At Risk.

Politically, the federal government no longer has the initiative in the national movement to reform public education. Governors, state education officials, school boards, local business leaders and communities are primarily responsible for the condition of our schools and are leading the effort to restructure and improve them. The National Governor's Association fully discussed and unanimously endorsed the Carnegie Plan at their meeting last August in Hilton Head.

This does not mean there is no task for the federal government. But unless community leaders become convinced that better schools are needed to make their community attractive for jobs with a future, school reform will not happen. Parents care about schools, but they are a diminishing fraction of the electorate. Unmarried voters, childless couples, retired people must all realize that their social security checks are going to come from the wages of young people now in school in communities all over America. It is not enough to take an interest in local schools and provide the needed resources. Every citizen must be concern about the education of all our children.

Fortunately governors have taken the political lead in articulating a strategy for a sound economy for their states, based in attracting growing businesses, encouraging research and advanced technology and leading the reform of public education. It is not necessary for all 50 states, or even a majority of them to agree on the reform strategy or its urgency. If a dozen succeed in demonstrating that educational reform will be rewarded by new job creation and plant relocation, the others will eventually fall into line.

But we have a mobile, national workforce, and a national supply of teachers. Can we really accept the implications of inequity, state to state, if we base our hopes for radical reform of the schools on state initiative alone?

The federal government must not shirk its proper responsibility. The task force saw no way that an adequate number of academically qualified minority students would chose teaching as a career and successfully complete all the training without substantial help from the federal government. The pool of future teachers is a national pool; the educational pipeline is very leaky, especially for minority students. And academically superior students have many other opportunities than teaching.

Many Americans are nervous about too strong a hand in education at the federal level. But let me give you my personal view on this point. Communities and states must set educational goals; schools and education professionals should

guide educational processes. The federal government should support the national resources on which effective, locally controlled education depends. These resources include:

* The pool of future teacher talent - especially minorities - supported in partnerships with state, local and national professional organizations;

* The mobility of teachers state to state, which calls for cooperation among the states toward a rationalized and portable pension system, and provision for job transfer without loss of professional status;

* Research on measures of educational progress leading to a national basis for comparison of school performance available not only to state and local officials but to parents and other citizens

* Research on effective educational processes, including the proper use of new educational technology and materials;
* Special attention to the educationally handicapped and disadvantaged, including the absorption into the educational mainstream of children of refugees and other immigrants brought in under federal authority.

* Special attention to education in critical fields such as literacy, where programs must reach beyond the schools, and in mathematics, science and technology, where federal projects place heavy demands on the talent pool.

On this last point, my I call the committee's attention to the report of the National Science Board's Commission on Pre-College Mathematics, Science and Technology Education, which was accepted by the Board and made public in September 1983. This report, prepared by a distinguished panel of Americans and co-chaired by Dr. Cecily Selby and the Hon. William Coleman, laid out a specific plan for math and science education, which underpins the federal government's investment of over $50 billion annually in research and development. Perhaps at another occasion, the Committee might want to invite these two distinguished Americans, along with officials of NSF to discuss the special problems of science education and the need for a clear mandate, both politically and from the Foundation's own constituency, in pre-college science education.

And the federal government has another major responsibility: to insure that the states, in meeting what they believe to be adequate standards of education for their citizens, do not produce profound inequities of opportunity from state to state that might unfairly handicap some Americans to the advantage of others.

I am persuaded Americans can compete with any other

nation, given an educational system that is competitive. And I am further convinced that Americans can and will reform their schools when the understand what is at stake, in economic opportunity, in social harmony and in self government.

The first step to making our schools as good as they need to be is recognition by the Congress and the Administration that educational reform must be an integral part of any long term strategy for economic revitalization. The second step is a partnership among government at all levels with business, education, labor and concerned citizens to deregulate and empower our teachers and administrators to do the job they, above all, are very eager to do.

Thank you.

The CHAIRMAN. Thank you very much.

We will question Mr. Barton first and then Dr. Branscomb, and if there are points or questions, we hope that members of the panel will jump in and express those.

Mr. Barton, in the report, you have noted the rather alarming status of literacy in America. Why do you think illiteracy has become so prevalent? Let me back up a little bit with a personal anecdote.

Just before the war, when I was a young student attending Gibbs School in London, my father was Ambassador, and my brother, Jack, was a student at that time and had just graduated from Choate. Jack was good friends with a fellow named David Harlick, who later became Ambassador to the U.S. and had a very distinguished career. The two of them were going to the continent for about three weeks. And my mother came downstairs and was helping my brother get into this little roadster they were going to travel in to the continent. It was a two-seater—I remember because of the shock on my mother's face, and you will hear why. She opened up the truck, and there was a bag and a box. She pushed the bag aside and pushed the box aside to make room for my brother's bag. One bag was soft, and the other was a box.

So she asked David, "What have you got in the box?"

And he said, "I have got books."

And she asked, "Well, how many books do you have in there?"

He said, "I have 18 books, because we are going for 18 days."

And my mother walked back in as my brother was coming down, and she saw this little, yellow-leafed book that he had in his pocket—he was a prodigious reader, in reality, and read all the time. But she asked how many books my brother was taking and he mentioned just a couple.

But I remember my mother walking in, and it always seemed from that time on that all of us were required to read an hour and a half a day from that point on. It was sort of a bellwether day for the younger members of our family, and I always traced it back to this time.

Let me just ask you what has happened in our educational system that the status of literacy has diminished—and I am using the word "diminished" in the broadest terms—as relates to your study? How did the problem become so prevalent?

Mr. BARTON. Well, the levels of literacy, as we report, seemed quite low despite the fact that we do not seem to have widespread, outright illiteracy. We do not have precise measures over time, Mr. Chairman. The assessments tend to be ad hoc, one-at-a-time, here and there, and they never quite fit together.

I cannot tell you precisely how we have changed over 10 years or 20 years with regard to these kinds of measures; however, over longer periods of time—we are talking about fairly long periods of time—we have become more literate.

I was here in 1963, with Daniel Partick Moynihan, then Assistant Secretary of Labor, testifying on the report about to be released, called "One-Third of a Nation" in which we were talking about one-third of a nation of young people being ill-prepared to serve in the armed forces if they were examined. In general, I do not think we are talking about a situation that bad now.

If we look at the literacy standard of 100 years ago, it was being able to write one's name. All of us can do that now, and in the assessment we gave people Social Security cards with a blank to write their names, and they could do that. So in those terms, we have progressed.

In World War II, the literacy standard was basically a fourth-grade level of education. Well, about 95 percent of all of our young adults now can do as well in reading as the average fourth-grader. And in the War on Poverty in the Sixties, we were talking about shooting for an eighth-grade level of literacy, and about 80 percent of our young adults can perform at that level.

So in terms of over time, long periods of time, we have, I believe, been advancing on the literacy front despite what seems to be a fairly grim set of statistics on how far we have come or where we are now.

The CHAIRMAN. Well, how do you interpolate that in terms of the future? I mean, are we just going to continue to make this same kind of progress in the future, given the status of our educational system?

Mr. BARTON. No, sir. I believe that one has reason for some optimism is in the fact that in reading, since 1971, with four assessments in reading of school students, if you look at what is in the pipeline, we have in fact been progressing in reading from 1971 to 1984, pretty steadily over four assessments. And not only are we progressing; blacks and Hispanics have been progressing at a greater rate. So while the gaps are still very large, there has been a narrowing of those gaps, and everyone has been moving up.

So in terms of what has been in the pipeline, coming into this 21- to 25-year-old group for the future, we should see improvement.

Now, reading in school and school-based reading is not the same as being able to perform real-life, real-world literacy tasks that employers see when they get young people, so I don't know how that will translate into improvement in literacy as we measured it for young adults.

The CHAIRMAN. Yes. Maybe you could talk a little bit about literacy and also maybe the writing skills as well.

Mr. BARTON. Yes. I think one of the most important things for remedial efforts that we have found from this fairly intensive two-year effort is the importance of a distinction between what you can do with the printed word in real life settings as compared to classroom setting reading, where you are taught mainly with narrative texts and the context is very limited in terms of the materials you have to deal with. We are finding that people who can read and say what is in a paragraph, when we measure student reading and report it to the nation, many of those, a large proportion, still cannot take the problem which is embedded in that text and use the information-processing skills which are required to take those instructions, remember them, look at a menu, find the things they ordered, add it up, know what they gave the waitress, and figure out what change they are supposed to get back.

Or in math, if you give those same people the numbers to add up on a piece of paper, they can do it.

So one of the important things is that teaching literacy strategies involves information-processing skills and problem-solving skills in

real life contexts, to ready them for employment and for other places. And much of our literacy effort, remedial effort, has been directed toward teaching, with school-based instruction, with school kinds of texts, to take adults and make them literate. What we really found is that more is involved than that. Most of them can read, but they need to somehow be imparted information-processing strategies and problem-solving strategies.

The CHAIRMAN. Most of these studies—I do not know if you want to put them in some kind of context, given your general concern about an educated society. When you look through these tests that are bantered around in terms of math and science, social studies, own language and foreign language, in comparison to other countries, we have our problems. What is your own assessment of how significant or important that is? I mean, what should parents feel about that? Should we be alarmed, or should we feel we are making progress in terms of literacy and reading, and perhaps not as much in writing; that we are really doing okay?

Do you draw any conclusions or have any observations?

Mr. BARTON. In the IEA international comparisons, which I assume those are based on, the International Education Association——

The CHAIRMAN. Yes.

Mr. BARTON [continuing]. We generally do not come out on top, as those tables show. It varies. Some of these comparisons are hard to make because of the differences in cultures and the differences in languages and the differences in the proportions who are in school. As Senator Harkin said, we have a fairly pervasive reach of our education system. It reaches much further than in lots of the other countries to which we are compared; we have more in school. So sometimes striking those rates leaves us looking worse than we really are. But we do know, certainly in hard science curriculum and in mathematics, there is a fairly large consensus that we are behind. Whether we are behind in literacy per se among young adult populations, I have seen no comparable studies, Mr. Chairman, that would really be able to make me speak precisely to that.

Senator STAFFORD. Mr. Chairman, could I ask a question?

The CHAIRMAN. Certainly.

Senator STAFFORD. Mr. Barton, maybe you were expressing the thought that occurred to me, and that was even though we might, say, be behind Germany in the numbers who are good in mathematics or science, percent-wise, there are so many more of us—would we have as many people who were competent in those areas as West Germany if we simply looked at numbers who were competent in this country vis-a-vis Germany, instead of the percent?

Mr. BARTON. Well, certainly, the numbers would make a difference depending upon the size of the country and the number, absolute number, of graduates.

Senator STAFFORD. I am not advocating that sort of argument; it just occurred to me, and I was curious about it.

The CHAIRMAN. I am not sure—as I remember the old OECD numbers comparing the numbers of scientists and mathematicians graduating, several of those countries, are higher. I remember that the Soviet Union's numbers are higher. That was years ago.

Mr. BARTON. Well, Dr. Branscomb could better answer that than myself.

The CHAIRMAN. Let me just ask a final question and then I will ask Dr. Branscomb the same thing. Are we teaching the right things in these schools? Where do you come out on that? Given the various kinds of studies, what conclusions do you draw? I think both of you have experience relevant to future kinds of industries. What is necessary today in terms of the possibilities of employment? You have heard the distressing figures that show that new opportunities in basic growth industries are all in the lower-paid jobs, with a few exceptions.

Are we teaching the right things, and if we are, what views do you have about how that can be enhanced. And if we are not, what suggestions do you have about how that can be altered and changed to suit an evolving and changing world where we are internationally competitive and involved in all of the cataclysmic kinds of pressures that are affecting our society in a variety of different ways?

What would you say?

Mr. BARTON. Senator, based upon and sticking with only what we know from what we learn from what we do, which are these national assessments of students, we have a fairly carefully-constructed format here. We measure what students know and can do based upon what the schools teach, so we assemble our national panels to reach consensus on what it is the schools teach and what the objectives of the schools are. It is not a curriculum, but it is the best guess as to what the schools teach. And then we go out and find out what students know and can do in the areas where the schools teach.

So the limited answer to your question is I am only telling you how we are doing within the context of what the schools teach.

The CHAIRMAN. Do you have a comment about writing? Did you reach any conclusions about that area?

Mr. BARTON. Yes, we reached very firm conclusions that were fairly widely agreed to, that writing instruction has been neglected. There are large changes in the last ten years and efforts to increase attention to writing, and there are strategies for teaching writing that have been only lately developed.

We have not had a writing pedagogy in this country the way we have had a reading pedagogy, and our teachers still need help there. There are new efforts at teaching across the curriculum. Teachers are urged to use the new processes and strategies for teaching writing. And those are being used more.

At our press conference releasing the Writing Report Card December 3rd, Mary Futrell, who is with us here, and Al Shanker commented upon what those writing reports mean for teaching. They expressed considerable concern and offered, I think, a constructive agenda for improvement.

But I think there is a large consensus that we are doing very poorly in writing; a large consensus that teachers need more help; that grading papers takes a lot of time; that the resources have to be increased in order to do that. But it is a real shortcoming, and I think there is a very broad consensus that that is the case, Mr. Chairman.

The CHAIRMAN. Senator Stafford?

Senator STAFFORD. I have no questions at this time, Mr. Chairman.

The CHAIRMAN. Tom?

Senator HARKIN. No questions, Mr. Chairman.

The CHAIRMAN. Dr. Branscomb, you mentioned somethings which I think has particular relevance, and that is accountability. I think the American people have to understand what we are accountable for at the Federal level, what the States are, and what the local communities are accountable for. We got into a little exchange with the Secretary earlier in the course of the hearing.

We have had these national reports that have come out, identifying some areas of concern. And I think the American people for the most part are confused about who really is accountable. I am sure the Congress and the Administration probably even have some disagreement about the areas of accountability.

But it seems that that is one of, I think, the real challenges in public life today, and one of the reasons the American people are somewhat turned off. The American people really wonder whether it is their local school community that should be held accountable, or whether it is their Governor, or whether it is their Senator.

You mentioned this accountability. And a number of years ago, we tried to get some study—we do not need a lot more studies, but we need some—to try and define, so we can let the public know, who is responsible in these areas so we can then begin to have some degree of responsibility.

Let me just ask you on this last question, whether you, as someone who has had wide experience in the private sector, obviously, and been very successful, feel that we are training people in the right areas in the school systems.

Dr. BRANSCOMB. I am not sure the issue is as much a question of what is being taught, or the content of the curriculum, as it is to understand what is the standard of performance that meets the society's needs. Harking back to the earlier discussion with Mr. Barton, you asked a lot of questions about whether or not literacy rates and so on had been improving. Apparently, they have been improving. The real question is are they improving as fast as the need, as the demand changes.

If we look at those charts on the wall, and ask how well does the U.S. stack up against other countries, it makes us feel badly to not be even with the best. But in fact if our economy depends upon Americans being more creative than people in other countries in order to sustain a leading standard of living and accept the burden for the defense of the free world, then it seems to me we have to be at the top of the list, not somewhere in the middle or somewhere trying to be equal with the better ones.

We are doing the innovations for Japan, but we are not matching them with productivity; we have got to do both if we want to be the leading country.

So my big concern is that the kind of work that is productive enough to support jobs that survive is changing rapidly. Let me give you an example—there are many products in the IBM Corporation that are built in quite automated factories. These factories are nevertheless quite labor-intensive. IBM, as you probably know,

has a full employment policy; it does not have layoffs when there is excess employment. The way it manages to do that is by training people into higher-level skills and getting more value per employee in those higher-level skills.

In a typical IBM plant that makes typewriters, copiers or some fairly simple equipment you may find 4 percent of the product cost is in the direct factory labor. Very few hourly workers in the factory, but there are many people trained as equipment maintenance technicians, as computer programmers, as job schedulers, as materials specialists and materials handlers, or process people. Not all are professional engineers; many of them at sub-professional levels. But they are adding more value to their jobs so they can be paid at levels higher than they were on the factory floor, and the company can afford the automation and other tools that makes that productivity possible, and keeps product costs competitive.

Now I ask you to compare the skill required to take a piece of semi-conductor process equipment and read and understand its instruction manual with the tasks at the highest level in Dr. Barton's literacy tests. I suspect it does not compare, and the literacy tests, even at the higher level, are now tough enough.

The technology that permits this productivity growth also accelerates and creates a globalization of work. It accelerates the possibility of taking a piece of the economic activity and going overseas with it. And if I add to that the fact that in Korea, 91 percent of the IBM Korean employees have a college education—it is a very highly-educated country—you see that we have no choice but to educate our people to achieve higher levels of productivity and to fully employ the creative genius of Americans.

I think that calls for—to your specific question—it calls first for solid curricula of knowledge accomplishment in the language arts, in math and science and in understanding our culture and our society and our government.

More important than that, it calls for a viewpoint on the part of the young people about their own future potential; what can you do with an education; what does an education mean to you.

Many of our young people do not understand what is at stake in their education. And I think many of their parents do not understand either.

On the issue of accountability, who is really accountable? The people in the community. The unfortunate thing is that for years we have depended on the PTA and the parents to sustain local support for the schools. Now we have got to get the retired people, single people and others to realize that what those schools do determines whether their Social Security checks are going to get paid. That is the issue—not whether the school is giving the children a nice social experience during their teenage years.

The CHAIRMAN. Well, you observe that in the future, education is going to open up some paths for future hope and opportunity—which is certainly part of the American dream. You have just indicated what is necessary for IBM, in terms of the upgrading and the training and the rest. What is your assessment about what is happening in these core curriculums that exist in the public school system?

Dr. BRANSCOMB. My impression, based, for example, on a very fine study called "The Shopping Mall High School", a book that came out last year, is that in the large, comprehensive urban high schools, there is a very rich curriculum—the book says that there are as many as 405 courses offered in a single high school. By and large, the curriculum for the children of the "yuppie" parents who are on a college track and whose parents are pushing them to take the advanced placement courses, is very rich and rigorous. There are good teachers, and these children generally get an excellent education.

Similarly, in those schools that do receive the government's assistance and do pay attention to education for those who need remedial help, like the handicapped, there are special provisions that help the schools do a good job there, too.

The rest of the students, perhaps 85 percent of the total, are adrift in a situation where the teachers are exhausted and unmotivated, where the students do not understand what they are missing if they make that compact with the teacher that says in class every day, "You do not hassle me; I will not hassle you." And that is what is happening in our schools. That is why the Carnegie Task Force focused not so much on either tightening standards or strengthening curriculums as it did on trying to create in the school an environment in which teachers and students alike are paying attention to what is really important, which is motivation and the excitement of learning and what its potential means. The teachers are the key to solving that problem.

The CHAIRMAN. Now, how is that altered or changed for that 85 percent? How do you alter or change that mix for those who are attending those schools in which those latter conditions are prevalent? How much is the local responsibility, how much is the State, where we are in terms of the national?

Dr. BRANSCOMB. I think the local responsibility is very strongly related to the goals and expectations of progress from that school system. And on accountability, the Carnegie Task Force took the view that it would be very desirable if the local community could define what educational progress might be possible with a good effort from the school and its faculty. If you could get the faculty to sign on to trying to achieve that goal, then we envisioned an idea that is being tried experimentally in Florida, which is to incent all the teachers collectively through a collective bonus to all the teachers in the school if the school overexceeds that goal.

Accountability for the teachers is in the educational process. It is to make education efficient, effective, exciting, interesting and motivating, challenging to the kids.

The community, it seems to me, has to set the goals. The State has the Constitutional authority. I think most States delegate it down to the community, quite wisely. But in many cases, the States have been so proscriptive of what the schools must do that it leaves very little latitude for the teachers to bring in their own imaginations and try to make it a more exciting and interesting enterprise.

Indeed, what the States are doing in those cases, I think, is trying to regulate quality into the schools because they do not have an operating system that creates quality if they delegate the responsibility. Many States, however, do delegate most of that re-

sponsibility for the educational process down to the local level, and I think many would be willing to do so if we could improve the quality and the motivation of teachers and the environment of the schools.

The CHAIRMAN. Finally on this, it seems to me that those teachers are being challenged with a thousand other kinds of requirements, which I think for the most part were never perceived to be the responsibility of the teachers in terms of authority and discipline within the classroom. Too many schools are filled with drugs; the dropout rates are too high. Maybe that is tied into a greater community involvement to try and keep the children in school; I think there is obviously an extremely important role there. There are the challenges of teenage pregnancy. There is a whole range of different social problems. There is the fact that the parents are working and the children are left alone and unsupervised in many instances.

What we hear, and I imagine we will hear later in the morning, is that they not only have educational challenges, but they have all these other kinds of responsibilities which detract from their ability to fashion and shape the climate and atmosphere where real educational opportunity would be available.

I do not know the extent to which you want to comment on how those other, extra forces affect the opportunities for educational development and how we are best going to deal with those.

Dr. BRANSCOMB. They do impact it. They make the job of teacher more daunting. Communities often look to the schools to solve social problems that probably should not be put at the door of the school; it is a convenient institution to go to.

You cannot get away from those issues. Those are real issues. We believe in a universal education system, and we have a diverse student body. But we really do need to give the teachers more of an opportunity to get together in a collegial way and to work out with the school principal how those extraneous factors can best be handled.

Our view also is that if teachers were professionally educated and given the professional job of teaching to do, and had a voice in how the school is managed from an educational point of view, there are many opportunities to use additional professional help. A national teacher corps has been talked about for young people to assist teachers. There are many other ways to organize the work of teachers in the schools that would allow the teachers to give more attention to education and at least will allow them more flexibility in how to work out responses to these other requirements.

The CHAIRMAN. Finally, what is the role of the private sector in this development? How should it be interacting with schools at the local level, or at the school district level?

Dr. BRANSCOMB. I think the private sector absolutely must take the lead in the local community in that debate on what the goals of education are—what is the relative priority to be given to academics and athletics; what is good enough in terms of performance in basic language skills, math and science.

Secondly, the private sector at State level has a very important role in making common cause with State political leaders of both parties to convince the public that if we are going to have a strate-

gy for competitiveness, the quality of local education is one of the three cornerstones of that strategy. People have to believe that. They have to believe it because we have a mobile, national workforce a mobile population of teachers. You cannot persuade people in Youngstown, Ohio that improving the schools in Youngstown is going to solve their unemployment problem. It probably will not. But it will equip the kids of Youngstown to go somewhere else and get a job.

So we all have to be persuaded that we have got to solve a national problem using local and State resources, primarily.

The CHAIRMAN. We used to have a Teacher Corps. That was one of the old programs that has been eliminated, one of the categorical programs, where we took teachers who had retired and were interested in coming back and serving in underserved areas, to try and use their skills. As you are probably familiar, at the time of the massive resistance program and the closing of the schools in Virginia, there was a volunteer program. And the outpouring of qualified teachers to go and teach in the schools was absolutely extraordinary, absolutely extraordinary. They taught for about two years there until the schools got reopened with virtually no regression in the educational competency of the students at that time. We have tried to replicate that in some of the underserved areas, but that program has been underfunded and effectively eliminated.

Senator Stafford?

Senator STAFFORD. Thank you, Mr. Chairman.

Dr. Branscomb, we listened earlier to a young man, Shin, who discussed the Japanese vis-a vis American schools, and one thing he noted was the respect for teachers demonstrated in that country and the more casual relation with teachers in this country. And I have wondered somewhat if, with respect to professionalism that you have mentioned, and the attitude of students toward teachers, we could have become too casual in this country.

I remember going to an institution of higher learning in my State, which I will otherwise leave nameless, and having lunch with the president of the college and some of his senior people, and looking over at a couple of other tables reserved for faculty, and at first I was going to ask him if he was allowing lumberjacks to come in and have lunch, because of their dress. But it turned out they were members of the faculty, teaching youngsters to become teachers.

Possibly a little better dress code in America in the teaching profession might lead to a little less casual and more respectful attitude on the part of teachers That is an observation.

Dr. BRANSCOMB. When I talk to teachers around the country, as I do from time to time, and I ask them, "What bothers you most about your career in teaching, or tempts you most to leave it?" almost every time, they mention the respect of the community before they mention compensation or the drudgery or the other problems. I think it is very important.

That is one reason why the Carnegie Task Force recommended the creation by teachers of a national, nongovernmental professional standards activity, to give board certification to those teachers who meet a high standard of professionalism. It is our view that a

professional standards board would improve the self-image of teachers who need to view themselves as professionals.

Secondly, we have recommended the abolition of the baccalaureate degree in education. Our view is that every teacher ought to have an arts and sciences degree with a major in an appropriate subject, and in addition, have an intensive training in pedagogy and how to teach. That, too, I think would go a long way to increasing the respect in which teachers are held.

Fundamentally, it is attracting the academically superior student into teaching and giving them an opportunity to work as a professional in a creative work environment that is going to win the respect of the community.

Senator STAFFORD. Thank you. Would you have any suggestion for us as to how we could get business more involved in what happens in elementary and secondary schools in this country?

Dr. BRANSCOMB. Well, I think first of all, you could make a contribution by engaging in a dialogue with them through the hearing process. I think you will find a great deal of interest and commitment to educational quality on the part of business leaders. I think many of them are unclear as to just how they can be most effective.

But there are companies who are experimenting with early retirement, with special incentives to those people who elect to take a teaching job when they retire. There are others who are loaning their employees part-time while they are employed, to perform various tasks in association with schools.

IBM, in fact, quite successfully opened up its own internal management schools to high school principals and superintendents, with very good success, and then had a program to help the States organize that kind of modern management training for its own school executives.

So I think there are a great variety of things the private sector can do. There are many areas that do not cost much money, but need some group of people who are practically-oriented, interested in education, to take a lead. I will give you just one example.

Based on the studies I have read, I believe there is enormous potential in what is called peer teaching or, if you like, student tutoring—students tutoring other students.

I believe it was the Pepsi-Cola Company in San Antonio that sponsored a program to reduce dropouts from high school, and somebody had the insane idea that the best way to reduce the dropout rate is to hire the kids that are dropping out to be tutors. They tutored kids two grades lower, and to the community astonishment, not only did these dropouts go back into school and get interested in academics; they propagated through their community the fact that teaching is a tough and respectable opportunity. The kids they were helping improved their work, too.

That is something that could be promoted on a national basis by some company, and I would hope one would do so.

Senator STAFFORD. Well, thank you very much.

Mr. Chairman, I would ask unanimous consent that if any of us on the Committee think of written questions we would like to submit, that we may be allowed to do so.

The CHAIRMAN. Yes, certainly.

I just want to mention, Dr. Branscomb, that we examined that years ago in the Poverty Program, and it was called the "Kiddie Corps". But we never even got it out of this Committee by the time people figured how it was going to be structured and how it was going to work. But perhaps we ought to revisit it to some extent in some kind of pilot program. Obviously, I would be interested, and I will find out more about it. I think there is a lot to that point.

Senator Humphrey?

Senator HUMPHREY. Thank you, Mr. Chairman.

To be sure, the problems in education are multifaceted, and there is blame enough to go around without finger-pointing. But I must say that as a fellow northern New Englander, I have to agree enthusiastically with Senator Stafford's observation that there is much too much, at least in my opinion, informality in the classroom today, not only in dress, but in behavior. And I am hardly an expert—I am sure, the least expert on this Committee—in matters of education—I was always a great failure at it myself, I have to admit. But I have been in a few classrooms in modern times where children address the teachers on a first-name basis. That kind of atmosphere can hardly be conducive to a respect for the business of the classroom, a respect for education itself.

So I join Senator Stafford in that hope, perhaps better directed at the representatives of the teachers' organizations. But inasmuch as I have to go to the Judiciary Committee momentarily, I wanted to express that.

The CHAIRMAN. I am afraid it is all going to be decided while we are up here, Gordon.

Senator HUMPHREY. Yes, that is why I have to leave.

Is it "Doctor" Branscomb?

Dr. BRANSCOMB. If you like—I am happy to be addressed as "Mister".

Senator HUMPHREY. You say in your testimony that the educational system is not up to the task, that our performance seriously lags our potential. Why? Perhaps you have already answered this, and I apologize for coming in late.

Dr. BRANSCOMB. Because Americans by and large, in their communities, believe in education but do not understand the relationship between the kind and quality of education and the economic stakes with the jobs of the future. That is where the private sector comes in, because if business leaders do not understand it and discuss it, nobody will understand it. They have got to help the communities understand the educational requirements for productive employment in the future.

Senator HUMPHREY. That is the problem of problems; that is at the heart of it, isn't it?

Dr. BRANSCOMB. I think it is at the heart of it. That is at the heart of the imbalance between emphasis on academics and emphasis on athletics.

One of the best biology teachers in the country is a member of the Carnegie Planning Group working on plans for the National Board for Professional Teaching Standards. She is certified every way from Sunday. She applied for a job teaching biology in a high school; she was told by the principal that she was the best-qualified biology teacher he had ever seen, and that if the basketball coach

they had offered the job to turned them down, she could have the job teaching biology.

That is what is happening in our schools. That is why I think the community is responsible.

Senator HUMPHREY. Well, it is always important to get at the essence of the situation, and that is an interesting observation. It certainly sounds valid.

I wish I could stay, but I have to go somewhere where the Chairman himself should be, but cannot be. So please excuse me.

The CHAIRMAN. Before concluding, have you had a chance to evaluate the budget in education as it relates to these particular functions, or would you do that for us?

Dr. BRANSCOMB. I have not done that.

The CHAIRMAN. Would you take a look at it as it relates to this particular function. I think the way you have identified the responsibility of the business community and tying into the local school area is obviously enormously important. It is a part of leadership, probably within the local communities and school boards and others. But I would be interested if you might review that—we will—to try and see if there are some things in there that lend itself to that kind of encouragement, or whether we ought to try and give some thought to something like a pilot project on that.

I do not want to unduly belabor you on it, but I would be interested if you could take a look and see whether you would have some recommendations or suggestions.

Dr. BRANSCOMB. With respect to the encouragement of the private sector?

The CHAIRMAN. Yes.

Dr. BRANSCOMB. Yes. I am not at all clear that any Federal expenditures of any substance are necessary, but some kind of national capability with which the private sector can work is probably needed.

The CHAIRMAN. Good. OK.

Senator STAFFORD. Mr. Chairman, if I could observe this to Mr. Branscomb, I do not think on the basis of scores over the last few years that either the Chairman's alma mater or mine have been putting undue influence on hiring coaches ahead of other members of the faculty. [Laughter.]

The CHAIRMAN. Thank you very much.

We are pleased to introduce members of the next panel: Mary Futrell, President of the National Education Association—we appreciate her presence here this morning and thank her for her willingness to join us—and Jacqueline Vaughn, Vice President of the American Federation of Teachers. Ms. Vaughn is President of the Chicago Teachers' Union. Senator Simon will be returning and wanted to give a special word of welcome, I am sure to the whole panel, but particularly to Ms. Vaughn.

These witnesses represent the teachers. I think all of us know the extraordinary importance and significance of teachers in all of our development. I do not think there is anyone on this panel or probably in the Senate who cannot remember the teachers who made a very profound and significant impact in the shaping and development of their own lives—it is true of myself as well as others. So we look forward to hearing from you.

We will start with Mary Futrell.

STATEMENT OF MARY HATWOOD FUTRELL, PRESIDENT, NATIONAL EDUCATION ASSOCIATION, AND JACQUELINE VAUGHN, VICE PRESIDENT, AMERICAN FEDERATION OF TEACHERS, AFL-CIO, AND CHAIRMAN, AFT LEGISLATIVE COMMITTEE

Ms. FUTRELL. Thank you, Mr. Chairman.

Mr. Chairman and members of the Committee, America's most precious ideals—equal opportunity, individual liberty, and social justice—depend on a free system of quality public education. This commitment must be renewed with each generation.

State and local officials have made, in my opinion, great strides and great sacrifices to meet the challenge of improving public education, and we are making progress. But far more remains to be done.

While the education reform movement has succeeded in establishing higher standards, it has done little to help at-risk students meet those standards. This is the dark side of education reform: our tragic inability to meet the academic and human needs of a growing segment of our nation's children.

Today in America, more than one-fifth of all youngsters are poor; close to 39 percent of all Hispanic youth live in poverty, as do more than half of all black children. At least one-tenth of all children in our schools have parents who are poorly-educated; millions speak a language other than English, and hundreds of thousands of these students have parents who are themselves children.

Moreover, the number of at-risk students is dramatically increasing. They are estimated to be at least 30 percent of all school-age children today, and they are projected to be the majority of our school population by the end of this century.

Without college education programs designed to meet their needs, these youngsters will be consigned to lives of poverty, hopelessness and despair. We as a nation cannot allow that to happen. Given the importance of these children to our nation's future and the high cost of programs to give them life and hope, serving their needs has required meaningful assistance from our Federal government. But this Administration has consistently tried to evade that responsibility.

I offer as evidence the President's proposed fiscal year 1988 education budget. For the seventh time in seven years, the Administration proposes to turn its back on the education reform movement. Hardest hit would be post-secondary student assistance programs. I would like to inject here that I totally disagree with the Secretary of Education when he responded to the question regarding the number of minority students going to college and said that there had not been a decline. Every study I have seen, every article I have read, every college president with whom I have spoken have said just the opposite—that the number of minority students going to college has declined to some degree because the financial support is not there.

We are very concerned that the Administration has proposed to cut post-secondary education by 45 percent and to totally eliminate vocational education.

To achieve a total reduction of $5.5 billion in the fiscal year 1987 education budget, the Administration proposes to terminate a host of other educational programs including Impact Aid "B" payments, public library assistance, desegregation assistance, women's educational equity, immigrant and refugee education, grants for handicapped infants, post-secondary student aid, and international education.

The same Department of Education that published "A Nation of Readers" is calling for a total elimination of Federal assistance to public libraries. The Department of Education that published "Schools Without Drugs" proposes a 50 percent cut in drug prevention programs. The Department of Education that stated last year, "Early intervention is among the most promising strategies for improving long-term educational attainment of handicapped children," this year proposes recisions for "unjustified 1987 spending such as support for the new early intervention programs"—those are their quotes.

In short, the Administration, despite its rhetoric about being in the forefront of the education reform movement, proposes that the federal government leave the field and watch from the stands.

For six years, those of us committed to educational excellence and equality have been fighting to slow the erosion of Federal support for education. The Congress and the American people do not agree that the welfare of our nation's children should be sacrificed at the altar of fiscal exigency.

We obviously cannot continue on this course with any expectation of enhancing the fabric of our society, our international competitiveness or our national security. Given the revenues lost if our citizens are unemployed or underemployed, and the expensive programs required to overcome previous neglect, support for education is the soundest investment our nation can make.

Mr. Chairman and members of the Committee, education is more than the key to personal attainment, to jobs, to economic strength or national security. It is the key to America's future. We must invest in that future now.

NEA's blueprint for education reform, "An Open Letter to America on Schools, Students, and Tomorrow", includes our recommendations for how the Congress and the Department of Education should help students, schools, parents, States and others attain academic excellence and equality of opportunity.

First, as we move toward the 21st century, we believe that we must clearly articulate the purpose of our schools and the expectations our students are to meet. We believe that to achieve this goal, we must broaden our ideas of what is to be taught, how it is to be taught, and how to measure student learning. Our students must have skills for lifelong learning. National research and programs to help local school districts develop curricula and materials to develop these skills, and programs to disseminate successful strategies for meeting students' learning must be continued, expanded and improved. Curricula must be revised to help children acquire the knowledge and skills to be productive citizens and to address the challenges of the future.

All the challenges proposed by the various national commissions, I must admit, will be but empty gestures unless we address as well

the physical conditions in the schools. We must address the issue of class size, teacher compensation, the very structure of the schools themselves. We must break down the walls that isolate teachers from teachers and teachers from students. In other words, we must make the schools learning centers.

In addition, we have a tremendous task ahead of us to try to develop strategies and programs which will allow us to successfully prepare and retain high-quality teachers in the profession. We must not look at teachers, but look at the whole area of administration as well.

Federal programs to assist students with special needs must become national priorities.

Federal programs which help local school districts complete the job of integrating our public schools and eliminating cultural and gender bias are critical to continued progress toward a more fully pluralistic society.

Federal programs which address nutritional, health care and other human needs of children and families must be strengthened because of their inextricable links with academic attainment.

Access to post-secondary education must be extended to all qualified students, regardless of personal financial means. Adult education programs are an important part of our nation's effort to address illiteracy and must be continued and expanded.

The federal government has an appropriate role in the support of those programs and institutions, including public libraries that foster lifelong learning.

Today 42 States spend at least one-third of their total budget to support education programs. Yet limited resources in many parts of the country set sharp constraints on the ability of State and local governments to provide full opportunity to all.

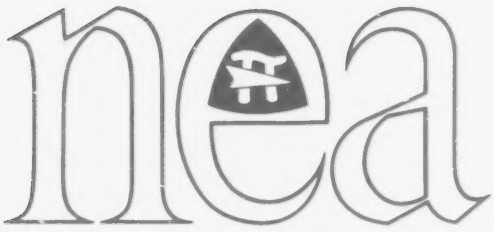
We must redirect national priorities in order to provide substantial increases in Federal funding for public elementary, secondary and post-secondary education through a program of general aid and categorical assistance.

We must establish a system of public education second to none. For meeting the future, there is no substitute for education. We must take full advantage of technological resources at our disposal, but we must never lose sight of the fact that public schools are human institutions and that education is and ought to be a humanizing experience.

Thank you very much, and I will be more than happy to respond to questions at the appropriate time.

The CHAIRMAN. Thank you.

[The prepared statement of Ms. Futrell follows:]



LEGISLATIVE INFORMATION

TESTIMONY

ON

NATIONAL GOALS IN EDUCATION

BEFORE THE

COMMITTEE ON

LABOR AND HUMAN RESOURCES

U.S. SENATE

PRESENTED BY

MARY HATWOOD FUTRELL

PRESIDENT

NATIONAL EDUCATION ASSOCIATION

JANUARY 14, 1987

MARY HATWOOD FUTRELL, President • KEITH GEIGER, Vice President • ROXANNE E. BRADSHAW, Secretary-Treasurer
DON CAMERON, Executive Director
(202) 822-7300

Mr. Chairman and Members of the Committee:

I am pleased to have this opportunity to speak to you today on an issue of such critical importance to our nation's future. The 1.8 million members of the National Education Association fervently agree that public education is the key to the future, and we demonstrate our commitment to that future each day in our work and in our lives. We appreciate this committee's strong interest in public education and your understanding of education's role in America's continued health and security.

America's most precious ideals -- equal opportunity, individual liberty, and social justice -- depend on a free system of quality public education. This commitment to excellence must be renewed with each generation.

For all the abuse heaped on the public schools in recent years, America's system of public education is a tremendous success story. The fact that I am sitting before you today is a tribute to the power of public education and to the highly trained, highly motivated, and loving individuals who gave of themselves to help me and my peers throughout my academic career. As I travel throughout the country, I meet thousands of my colleagues, from classroom teachers to bus drivers to college professors and people working in every other education profession, and as I look into their eyes I see the same intelligence, motivation, and love for students from which I benefited.

I know that we're here to discuss educational technology and equipment and innovation and resources, and I will talk about those things. But I want us never to forget that the fire burning in the lamp of education is the people who work in the schools. And despite setbacks, of which we are all aware, that fire burns as brightly today as ever.

Invidious Comparisons

We have all read a vast number of nostalgic paeans to some golden age of public education in this country, be it 30, 50, 100 years ago. Before we make too much of these comparisons, I believe we should stop and take a realistic look at what America's schools were really like a generation ago.

Throughout the 1950s, you may recall, public opinion clung to the same truism that many people embrace today -- that America's public schools had suffered a great decline from previous years. And yet at that time hundreds of thousands, indeed, millions of students were tragically underserved -- or shut out of the system entirely.

No one can claim that 20 or 30 years ago, our public schools had the resources, the programs, or the commitment to serve minority, handicapped, limited-English proficient, or disadvantaged students. Most minority students were relegated to separate but unequal schools. There were few programs for the handicapped. Non-English-speaking students were subjected to a sink-or-swim experience with little or no language instruction. And there was little recognition of the need for special programs to serve the academic needs of low-income students.

The public schools today are quite a different story. In fact, America's public schools represent America's greatest success story. The great

technological and social progress we have made in recent years is bound together with the progress in our system of public education. In considering the condition of public education today, let us not fall into the trap of nostalgia. This is not a time to look back. We can and must move forward, using the experience of our own history.

At the same time, we have read and heard many invidious comparisons between America's public schools and the public schools of other industrialized nations. I would hope that we would look closely at what other nations do with an eye toward reembracing the successful techniques they have borrowed from us.

In considering the adoption of any successful techniques, we should not lose sight of two of the greatest strengths underpinning America's system of public education: creativity and democracy. Mastery of factual information is an elemental part of learning, and yet educators in nations such as Japan look with envy at the creativity and individuality of American students. At the same time, Americans are fiercely committed to local control over public education, and we have many reservations against a national curriculum or federal school system. Moreover, our commitment to democracy and free choice would prohibit the adoption of an educational system that determines for individuals whether they will pursue vocational or college preparatory courses of study before they enter high schools.

In short, in looking at the present condition of America's public schools, let us not allow our desire to improve and reform cause us to undervalue the special qualities of our system. Our public schools are good and getting better. And with the cooperation of federal, state, and local government, parents, community leaders, educators, and the students themselves, America's public schools have the potential to eclipse those of all other nations.

Where We Are

As a teacher, I am delighted that Americans have turned their attention to public education in recent years. I am thrilled to hear government officials, business leaders, and thousands of others calling for the same things the National Education Association has advocated for many years.

State and local officials responsible for public education have made great strides, and made great sacrifices, in order to meet the challenge of improving public education, from pre-kindergarten to graduate school. In the face of limited resources, state governments in particular have been willing to accept the responsibility for assisting local school districts.

We are heartened by the progress made in salaries and other compensation to attract and retain qualified individuals to teach and work in the public schools. But those recent gains have done little more than compensate for years of neglect. While teacher salaries have risen faster than the rate of inflation over the past three years, the average teacher salary has risen in real terms by only 1.8 percent in the past 10 years. That increase in averages is small consolation to those thousands of education employees who

earn far less than the average, and far less than their counterparts in professions that require similar skills and training.

We applaud the efforts of states that have turned their attention to responsible reforms in preparation and certification for professional educators. Many recent education reform reports -- including reports of the Carnegie Foundation, Holmes Group, and National Governors' Association -- agree that had policymakers included educators in the design of classrooms and curricula, this nation would have a more student-centered, more effective system of education today. Had policymakers granted educators professional status -- including the power to control who enters the teaching profession -- America would never have become a nation at risk.

As we consider proposals for upgrading teacher training programs, teacher certification and recertification procedures, and strategies for constantly upgrading the skills of education professionals, note well that if we want professional results, we must grant teachers professional recognition. If we want a self-improving profession, we must create a self-governing profession. NEA supports the creation of a national professional standards board which would provide guidance and assistance to state standards boards to ensure that all those who enter education professions meet the highest possible standards before they enter the classroom.

America's goal must be a qualified teacher in every classroom.

Setting standards for professional educators has traditionally been a state responsibility. While much needs to be accomplished in this area, the states are accepting their responsibility and making every effort to meet the challenge.

We applaud the many responsible reforms that local school districts have adopted in the area of curriculum and materials. Many school districts have strengthened graduation requirements, taken a hard look at deficiencies in all areas of the curriculum and worked to address those deficiencies, and established more rigorous -- and clearer -- expectations of students.

Setting standards for curriculum has traditionally been a local responsibility. While much needs to be accomplished in this area, local school districts are accepting their responsibility and attempting to meet the challenge.

Progress Has Not Been Universal

Rebuilding our nation's schools means developing programs that meet the needs of the students they serve. The education reform movement has succeeded in establishing higher standards in our schools, but it has done little to help at-risk students meet those standards.

This is the dark side of the education reform movement: our tragic inability to fully meet the academic and human needs of a growing segment of our nation's children.

Today, poverty and its concomitant deprivations are becoming more and more widespread across our nation -- especially among minorities. Today more

than one-fifth of all American youngsters are poor -- an increase of 33 percent since 1979. Close to 39 percent of all Hispanic youth live in poverty, as do more than half of all Black children. At least one-tenth of all children in our schools have parents who are poorly educated. Millions speak a language other than English. And hundreds of thousands of these children have parents who are themselves still children. They are the offspring of teenage parents who can offer their children little or no guidance or discipline.

Our nation has seen alarming rates of drug abuse and suicide, and a devastating drop out problem. Too many children must attend school unable to concentrate on their studies because they are hungry, ill-clothed, unhealthy, or suffering from high levels of stress. Moreover, the number of at-risk students is dramatically increasing -- students living in poverty, students whose parents do not speak or read the English language, students from single-parent homes, students whose parents are themselves students, students whose parents are illiterate. They are estimated to be at least 30 percent of all school-aged children today, and they are projected to become the majority of our school population by the end of the century.

Without quality education programs designed to meet their needs, these youngsters will be consigned to lives of poverty, hopelessness, and despair. We simply cannot allow that to happen.

Given the importance of these children to our nation's future, and the high costs of programs to give them life and hope, serving their needs has required meaningful assistance from the federal government. But over the past six years, this Administration has attempted to evade that responsibility and made every effort to ignore the challenge these students present.

Administration's FY88 Education Budget

I offer as evidence exhibit A, the President's proposed FY88 education budget.

For the seventh time in seven years, the Administration proposes an education budget that turns its back on the education reform movement. Hardest hit in the Administration's proposed FY88 education budget are postsecondary student assistance programs, which the Administration would cut by 45 percent, and vocational education, which the Administration would totally eliminate.

The Administration calls for a total reduction of some $5.5 billion in funding for programs administered by the U.S. Department of Education; a 28 percent reduction over the FY87 funding level of $19.5 billion; rescissions of more than $2.5 billion in the FY87 education budget; projections for lowering Department of Education funding to $12.5 billion by 1992.

The Administration proposes to terminate a host of education programs, including Vocational Education, Impact Aid 'B' payments, Public Library Assistance, Desegregation Assistance programs, Women's Educational Equity, Immigrant and Refugee Education programs, grants for handicapped infants, postsecondary Supplemental Grants, Work/Study, three special postsecondary programs for disadvantaged students, and International Education and Foreign

Language Studies. Yet with a straight face, the Secretary of Education states that these devastating budget recommendations emphasize support for programs that enhance educational opportunity for the poor, disadvantaged, and handicapped.

The same Department of Education that published A Nation of Readers is calling for total elimination of federal assistance to public libraries. The Department of Education that published Schools Without Drugs proposes a 50 percent cut in drug prevention programs. The Department of Education that stated last year "Early intervention is among the most promising strategies for improving long-term educational attainment of handicapped children," this year proposes rescissions for "unjustified 1987 spending, such as support for the new early intervention and supported employment programs."

In short, the Administration -- despite self-serving rhetoric about being in the forefront of the education reform movement -- proposes that the federal government leave the field and watch from the stands.

For six years, those of us committed to educational excellence and equality have been fighting tooth and nail just to slow the erosion of federal support for educational opportunity. The Congress -- and the American people -- do not agree that the welfare of our nation's school children should be sacrificed at the altar of fiscal exigency. The most recent Gallup Poll showed that 9 out of 10 Americans believe that the future strength of the United States depends more on education than on industrial efficiency or military superiority. In a recent Harris Poll, 97 percent of the business leaders questioned agreed that an educated workforce is the key to America's future economic prosperity.

I am not concerned only for the sake of educational institutions. The schools, the colleges and universities, and other enterprises devoted to learning can recover. But the opportunities for students which are lost in an age of neglect may never be regained.

Our commitment must begin with quality preschool and early intervention programs. If we do not provide students a strong foundation in the elementary grades -- mastery of reading, comprehension, and basic mathematics -- we will lose them in high school. If we do not provide a strong foundation in the secondary schools -- including critical thinking and problem-solving skills -- we erase their chances for any hope of success in college. The same is true on up the line, straight through postgraduate studies in the school of life.

Those individuals we allow to slip through the cracks in our educational system, tend to fall through the cracks in our society. And as the cracks grow wider, we are increasingly in danger of driving a deeper and deeper wedge between the haves and have-nots.

Mr. Chairman, education is more than the key to personal attainment, more than the key to jobs, more than the key to economic strength or national security. It is the key to America's future. And yet, today, 30 percent of all students leave school before they complete their education. The problem is particularly acute among minorities. In some cities, the dropout rate among blacks is estimated to be about 50 percent, and shockingly, 70 to 80 percent of all Hispanic youngsters leave school before graduating. This is

not a problem confined to some urban ghetto or barrio. It reaches into every corner of our society. The dropout rate in Louisiana has risen to over 50 percent.

We obviously cannot continue on this course with any expectation of enhancing the fabric of our society, our international competitiveness, or our national security. Given the revenues lost if our citizens are underemployed and the expensive programs remedial programs to overcome previous neglect, support for education is the soundest investment our nation can make.

We must invest in that future now.

A Vision for the Future

The National Education Association is committed to working with Congress and others responsible for putting our national priorities in order. It is not the dollars alone, but the programs and professionals who conduct those programs that will take education -- and our nation -- forward.

NEA is working actively to address some of the issues I have mentioned this morning. We have committed significant resources to Operation Rescue, our own internal program to find effective strategies for dealing with the dropout problem. For many years we have provided parents with information to help them participate in the learning process, and recently we have been working with the Home and School Institute to enhance that effort. Together with our state affiliates, NEA has been working to create or strengthen existing state professional standards boards and to upgrade teacher preparation programs and tighten certification standards. And we are working on many other fronts to address other education needs, including adult illiteracy, teenage pregnancy, chemical abuse, and many others.

A little over two years ago, NEA drafted a blueprint for education reform, An Open Letter to America on Schools, Students, and Tomorrow. This is not a document that NEA drafted to throw on the pile of education reports and walk away. Our members are committed to seeing these recommendations become reality. I invite you to read this, but more importantly, I hope that the members of this Committee will come to share our vision for the schools of tomorrow.

This report speaks to what parents, students, states, school districts, and others can do to create a system of excellence and full opportunity in education. And it includes NEA's recommendations for an appropriate federal role in that partnership.

Any plan for tomorrow's schools must be grounded in today's reality. All the changes proposed by the various national commissions will be empty gestures unless we do something about the physical conditions in the schools, class size, teacher compensation, and the very structure of the schools themselves. We must break down the walls that isolate teachers and students.

We believe the Congress and the Department of Education must help to meet students' learning needs, to ensure each student's right to learn and to succeed, to provide students of all ages with equal access to school, to help

coordinate school and community services, and to help finance our schools adequately.

As we move toward a system of schooling for the 21st century, we must broaden traditional ideas about what is taught, how it is taught, and how to measure student learning.

Basic skills will continue to be critical, but given the rapid changes in our world, it is vital that today's students have the skills for lifelong learning -- including the ability to think critically, to analyze issues, to formulate solutions to problems, and to ask and seek answers to questions. Every school should establish clear, significant, appropriate, and achievable expectations for students.

National research, programs to help local school districts develop curricula and materials to develop these skills, and programs to disseminate successful strategies for meeting students' learning must be continued, expanded, and improved.

Equity in educational opportunity must become a cornerstone of America's system of schooling. Students with special needs, particularly the disadvantaged, limited-English-speaking, the handicapped, and the gifted and talented need more than equal access. They need programs designed to help them realize their full potential.

Federal programs to assist disadvantaged, limited-English-speaking, handicapped, and gifted and talented students must become national priorities.

Federal programs which help local school districts complete the job of integrating our schools and eliminating cultural and gender bias are critical to continued progress toward a fully pluralistic society.

Federal programs which address the nutritional, health care, and other human needs of children and families must be strengthened because of their inextricable links with academic attainment.

It is no longer sufficient to view education as an activity that takes place for only a limited number of years. Learning must be continuous if we are to prepare Americans for the technological and social changes of today and tomorrow.

The federal government has an critical role in the development of appropriate pre-kindergarten programs that provide the foundation for successful academic careers.

Our competiveness, our security, our technological, economic, and social progress depend on fully developing the nation's intellectual capital. Access to postsecondary education must be extended to all qualified students regardless of personal financial means.

Illiteracy must be eliminated. Federal adult education programs are an important part of our nation's effort to address this problem and must be continued and expanded.

The federal government has an appropriate role in the support of those programs and institutions -- including public libraries -- that foster lifelong learning.

Students who suffer from abuse, neglect, hunger, poor health care, or who are caught up in chemical abuse, promiscuity, or anti-social behavior present an educational, as well as a social, challenge to our nation. The schools do not have the resources, time, and skilled professionals to fully address the problems, but they can play a critical role in coordinating these services.

Federal support for programs that address the human needs of children and families are vital to continued progress in the education reform movement. Appropriate services must be extended to all those in need.

State and local governments have made great progress in recent years in providing additional resources to accomplish our national goal of improving education. Today, 42 states spend at least one-third of their total budget to support education programs. The level of local support for public education varies widely across the country, but communities everywhere are recommitting themselves to the improvement of education. And yet, limited resources in many parts of the country set sharp constraints on the ability of state and local governments to provide full educational opportunity to all.

The United States must redirect national priorities in order to provide substantial increases in federal funding for public elementary, secondary, and postsecondary education through a program of general aid and categorical assistance.

Conclusion

As we work to meet the future, we must start today to establish a system of public education second to none. Building for tomorrow will involve taking full advantage of some of the great technological resources at our disposal -- including computers, interactive video, satellite transmissions, and more. But we must never lose sight of the fact that public schools are a human institution, and that education is -- and ought to be -- a humanizing experience.

Machines cannot do our thinking for us, and they cannot do our caring for us. For educating our young, there is no substitute for qualified teachers and other education employees. And for meeting the future, there is no substitute for education.

Thank you.

The CHAIRMAN. Ms. Jacqueline Vaughn.

Ms. VAUGHN. Thank you, Mr. Chairman, members of the Committee.

I welcome this opportunity to address the Committee in behalf of the American Federation of Teachers and as President of the Chicago Teachers Union, to share with you our concern as we enter into phase two of the education reform debate and to assure you that we are deeply concerned that education reform succeed as a system of public education, and to point out that in order to have a successful role in Federal education, vocational education, impact aid, and the National Defense Act, which were in existence for the K-12 system, be expanded and enhanced.

As we approach the 21st century, it is again time to make an investment in education that will not only serve the students who will benefit most directly from it but also enrich our entire society.

Unless we are able to utilize the contributions of virtually every member of the next generation, our country may not continue to prosper but rather, for the first time, will relinquish its leadership role.

I listened with interest to the prior testimony given by the young student from Japan who noted that there was a high degree of respect for teachers in Japan as opposed to lack of respect for the same type of career in America. We feel that while respect is earned, it is absolutely essential to restore to this public education system respect and dignity for a profession that has long enjoyed the most honored position; that we also have to work together to have a shared accountability; that such accountability is shared from the Federal level along with the State and national level, and that parents and community leaders have an active role in restoring that kind of respect.

Many of the pressing issues in education do not necessarily lend themselves to Federal solutions. However, such a solution would provide incentives to improve the quality of the teaching force which would benefit from Federal support.

The major Federal role, providing educational enrichment for the disadvantaged and the handicapped, is still unfulfilled. We believe that in the next two years, Congress should focus its attention on improving programs such as Chapter I, vocational education, and education for the handicapped.

The AFT recommends that attention be paid to restoring the aid and expanding the Chapter I program, which has been hampered over the past six years by the huge budget deficit and a hostile Administration.

We urge that the program that is now known as the Education Consolidation and Improvement Act of 1986 be reauthorized and enhanced. Chapter I of that program is of the greatest concern to the AFT. The financial support of compensatory education is crucial to our country if we are to be able to meet the challenges that confront us.

Data proves that disadvantaged students who have been fortunate enough to get into a Head Start Program and a Chapter I program will benefit significantly better as they progress through the elementary school system.

We recommend that Chapter I also be amended to create a preschool education program to function along with the current Head Start Program, so that every child at risk educationally will be assured of a good start in school.

Some of the problems of Chapter I can be solved with education funding. We recommend that the Committee in its reauthorization set goals so that within three years every student who would benefit from a Chapter I program could be assured that a program will exist for them.

In addition, Chapter I is virtually nonexistent at the high school level or during the summer. And again research shows the gains made on a Chapter I program are partially lost when students go to high school if there is no followthrough.

We further recommend that the establishment of programs for Chapter I be done at the high school level. A phase-in might be required if budgetary restraints dictate this, but within a three-year period, we urge implementation of a full Chapter I program for high school students in need of such training.

We recommend that in schools with 75 percent or more of disadvantaged students schoolwide, compensatory education programs be provided. The additional funds needed to run a compensatory program schoolwide, rather than with pullouts, could be funnelled through the Chapter I Concentration Grants programs authorized in 1978 and 1981 and which are currently unfunded. This approach, we feel, could result in programs that would permit a more coordinated, comprehensive approach to compensatory education.

We would like to recommend also that there be a major reevaluation of the Chapter I program to help focus compensatory education on those parts of the program that work best. We urge the reauthorization include provisions for evaluating that program.

Another area that demands attention is the quality of the teaching force. There is currently a move underway to consider incentives to attract high-achieving high school graduates into the teaching field. It is our hope that the $5,000 scholarships that are provided through the Congressional Teachers Scholarship program will attract such candidates into teaching. We view this program as an area where a relatively small amount of Federal aid could net big dividends.

In addition to supporting educational enrichment for the disadvantaged, the Federal role in education for the rest of the century must include a greatly expanded and improved research capability.

As in the teacher scholarship program, a small investment in research capability of the Department of Education could translate into better results.

The AFT is urging that Congress begin the fight against dropouts with research. This means expanding the research capability of the Department of Education and requiring that when research is done that solutions be proposed and recommended and fully implemented. We believe that children who are exposed to a Chapter I preschool and high school program will not be subjected to the possibilities of being dropouts.

In a similar vein, the controversy that is surrounding the possibility of a teacher shortage which might occur in the next ten years. We are willing to say that the shortage is here now in some

segments of the country. And we suggest that the Department of Education be charged with studying the issue and coming up with an answer before it is too late.

We recommend that the teaching of foreign language should be an important component of any attempt to improve our Nation's competitiveness in the world. In recent years, increased Federal support for math and science has been initiated. However, the program that was enacted by Congress was so narrow in scope that most school districts hardly noticed that it even existed.

The math/science program was flawed by a failure to focus the resources on the one level where real progress must begin, and we feel that is at the elementary level.

A final area that we feel needs to be addressed by this Committee in the 100th Congress is the early childhood education and day-care program. The lack of a high-quality, safe day-care program has become a national scandal because, while we have not focused on it, many young people do not come from homes where there are two parents. There are many single-parent homes, and the one parent is required to work.

The need for both parents to work in today's economy is well-documented. The need for an early childhood program is also well-documented and obvious. The public schools are in the best position to offer a comprehensive program for parents who want such a service, for themselves and for their children. Extension of Chapter I to preschoolers could be a part of the solution.

The purview of this Committee and the focus of this hearing is broad and very important. We have focused our comments on the Federal elementary and secondary education role. We feel that education is an investment that pays dividends to our entire country.

There are many other areas that we will be developing in the form of a full package of recommendations that we hope will be given serious consideration during this 100th Congress.

I would also like to share with you a greater concern that we have for the role and implementation of recommendations to enhance the relationship between the Administration and faculties in the various schools across the country, a better working relationship and interpersonal relations, and serious consideration be given to giving further support at the local level to those schools that need assistance in providing security; we further emphasize the need for assistance in developing discipline codes, and also good working relationships in communities between the schools, the business community, and those funding agencies at the State and local levels.

Thank you for this opportunity. I will be happy to answer any questions.

[The prepared statement of Ms. Vaughn follows:]

TESTIMONY OF JACQUELINE VAUGHN
VICE PRESIDENT
AMERICAN FEDERATION OF TEACHERS, AFL-CIO
CHAIR, AFT EXECUTIVE COUNCIL ON LEGISLATION
BEFORE THE SENATE COMMITTEE ON LABOR & HUMAN RESOURCES
January 14, 1987

Mr. Chairman and Members of the Committee: I am Jacqueline Vaughn, Vice President of the AFT and President of the Chicago Teachers Union, an organization of more than 26,000 members who teach in the city of Chicago. In addition, I am Chair of the AFT Executive Council's Legislative Committee.

I am here today representing the AFT, an international union of more than 630,000 members. The AFT represents teachers, paraprofessionals and other classified school employees all of whom have a great interest in your deliberations concerning the state of American education.

By now, most of us know what ideas comprise the education reform movement. In addition to coming to Washington to represent the AFT at this hearing, I am also here to attend a five-day conference for AFT staff and leadership to examine what we now call the "second wave" of education reform. This union takes its role in the reform debate very seriously. We are proud to contribute our time and talents to this tremendously challenging task.

Nothing is more important to the future of American public education than that the education reform movement succeed. We must revitalize our system of public education and we must assure that teachers as professionals play a role in that reform process. Prior to 1965, the federal role in education was minimal. Vocational education, Impact Aid and the National Defense

Education Act were in existence for the K-12 system as were a few laws that aided postsecondary schools. Prior to 1965, however, the single greatest involvement of the federal government in education came through what was known as the World War II G.I. Bill of Rights.

The G.I. Bill of Rights provided educational opportunities for millions of veterans who had served their country. In the process of providing these benefits, our nation was made immeasureably richer. It has been estimated that for every dollar spent on G.I. Bill education benefits, $14 was returned to the federal treasury through increased tax collections resulting from increased earnings. This 14-to-1 ratio, as astounding as it may seem, indicates that spending on education is an investment rather than a cost.

As we approach the 21st century, it is again time to make an investment in education that will not only serve the students who benefit directly from it but will again enrich our entire society. Unless we are able to utilize the contributions of virtually every member of the next generation, our country may not continue to prosper but rather--for the first time may relinquish leadership role. We know that in the years ahead there will be intense competition for college graduates because the size of the generation coming of age is significantly smaller than it has been in the past. The federal government has a major role to play in providing increased educational opportunities for all students especially those who traditionally have not been high achievers. If the federal government does not fulfill its role,

we may well be faced with an economy hamstrung because of a shortage of qualified people.

Since 1983, when the President issued the landmark report "A Nation At Risk," American education has undergone an unprecedented examination of its shortcomings. We in the AFT feel that such self-analysis was overdue. Yet, pointing out shortcomings is not the same as helping to solve them. While we applaud President Reagan and his administration for having started the ball rolling, I will say that in the three years since "A Nation At Risk" was issued this administration has been long on rhetoric and short on money. This administration has become expert at telling others what needs to be done while turning its back to the problems. We note that the administration's latest 28 percent education budget cut has been justified by pointing out that an $11 billion education increase is projected from "other sources."

For the past six years, education has remained in the province of the federal government only because of bipartisan support in the Congress for a continued federal role in education. We acknowledge the debt that education has to the members of this committee--Republicans and Democrats--who fought to preserve federal programs at a time when the administration actively sought ways to reduce or eliminate most education programs.

While many of the pressing issues in education do not lend themselves to federal solutions, some such as providing incentives to improve the quality of the teaching force, can benefit from federal support. The major federal role, providing educational enrichment for the disadvantaged and the handicapped, is still unfulfilled. We believe that in the next two years Congress

should focus its attention on improving programs such as Chapter I, Vocational Education and Education for the Handicapped.

The AFT recommends that attention be paid to restoring and expanding the Chapter I program, which has been hamstrung over the past six years by a huge budget deficit and a hostile administration. We urge that the program that is now known as the Education Consolidation and Improvement Act of 1986 be reauthorized and enhanced. Chapter I of that program is of greatest concern to the AFT. The financial support of compensatory education is crucial to our country if we are to meet the challenges that confront us. Data proves that disadvantaged students who have been fortunate enough to get into a Head Start program and a Chapter I program do significantly better in school than their peers who were not able to participate in these programs. We recommend that Chapter I be expaned to create a preschool education program to function alongside the Head Start program so that every child at a risk educationally be assured of a good start in school.

Some of the problems of Chapter I can be solved with education funding. We recommend that the committee in its reauthorization set goals so that in three years every student who would benefit from a Chapter I program could be assured that a program will exist for them. In addition, Chapter I is virtually nonexistent at the high school level or during the summer. Again, research tells us that gains made in the Chapter I program are partially lost when students go to high school. We therefore recommend the establishment of Chapter I programs at the high

school level. A phase-in may be required if budgetary restraints so require, but within three years we urge a full Chapter I program for high school students in need of such a program. We recommend that in schools with 75 percent or more disadvantaged students, compensatory education programs be provided schoolwide. The additional funds needed to run a compensatory program schoolwide rather than with pullouts could be funnelled through the Chapter I Concentration Grants programs authorized in 1978 and 1981 and currently unfunded. This approach should be tried; it could result in programs that have an economy of scale that permits a more coordinated and comprehensive approach to compensatory education. The AFT also recommends a major evaluation of the Chapter I program to help focus compensatory education on what works best. We urge that the reauthorization include provisions for evaluating the Chapter I program.

Another area that demands attention is the quality of the teaching force. There is currently on the books a $25 million program designed to offer incentives to attract high-achieving high school graduates to teaching. It is our hope that the $5,000 scholarships provided through the Congressional Teachers Scholarship program will attract good candidates into teaching; we view this program as an area where relatively small amounts of federal aid can pay big dividends.

In addition to supporting educational enrichment for the disadvantaged, the federal role in education for the rest of this century must include a greatly expanded and improved research capability. As in the teacher scholarship program, a small investment in the research capability of the Department of Educa-

tion could translate into great results. As the elected leader of the teachers in one of the nation's largest school districts, I can tell you about one of our greatest concerns: the problem of dropouts. We know what happens to the lives of students who do not finish school, yet nothing is being done on a national level that would help school districts meet their dropout problems head on. The AFT urges that the Congress begin the fight against dropouts with research. This means expanding the research capability of the Department of Education and requiring that when research is done, solutions be pursued. We do believe that extending Chapter I to preschool and high school students will have a positive effect on dropouts.

In a similar vein, there is much controversy about teacher shortages over the next 10 years. Some have offered the opinion that there may not be a teacher shortage at all. All the facts available to the AFT indicate that a teacher shortage is imminent. Charge the Department of Education with studying the issue; let's get the answer before its too late.

The teaching of foreign languages remains an important component in any attempt to improve our nation's competitiveness in the world. In recent years, increased federal support for math and science education was initiated. Unfortunately, the program that was enacted by Congress was so narrow in scope and means that most school districts hardly noticed it even existed. The math/science program was further flawed by a failure to focus the resources on the one area where real progress must begin: the elementary school. By the time a student enters high school, it

is too late to attempt teaching advanced mathematics or sciences if students have not learned the basics in elementary school. When the original math/science bill was making its way through the Congress, the AFT urged that the focus be at the elementary level. We hold steadfast to that approach and urge the Congress to redirect the thrust of this legislation.

Problems exist in the world of international trade: Americans are largely untrained in the languages of our trading partners. This is a national problem, and we believe a national remedy is appropriate. Legislation designed to increase our literacy in foreign languages should not ignore the role of the elementary school in teaching and stimulating a later interest in foreign languages.

A final area that needs to be addressed by this committee and the 100th Congress is early childhood education and day care. The lack of high-quality, safe day care has become a national scandal.

The need for both parents to work in today's economy is well documented. It now takes two earners to provide the standard of living that one earner could achieve 30 years ago. In addition, we know from such studies as "Changed Lives," which compared the educational employment achievements of children who participated in a Head Start program to those who did not, that early educational intervention can be crucial for disadvantaged children.

The need for an early childhood day care program is also obvious. The public schools are in the best position to offer a comprehensive program for parents who want such a service for themselves and their children. Extension of Chapter I to pre-

schoolers could be part of the solution. More needs to be done.

The purview of this committee and the focus of this hearing is broad and important. We have focused our comments on federal elementary and secondary education progams. We trust that the administration's current assault on postsecondary education will not succeed this year. 1987 is the year to get off the defensive and see what is needed by our country and its schools. As I pointed out earlier in this statement, education is an investment that pays dividends to our country. Now is the time to make sure the investment is adequate to meet the great challenges ahead. Education is the key to global competitiveness, military strength and domestic prosperity. The 100th Congress must be the one that reaffirms our nation's long tradition of commitment to education and thereby to our nation's future.

There are many other areas that we should address. The AFT is in the process of formulating a full package of recommendations for this Congress, and will, at a later date, provide that comprehensive program. Thank you.

opeiu#2/aflcio

The CHAIRMAN. Thank you very much.

Maybe we could address questions to both of you.

Ms. Futrell, you recognize an important role for the Federal Government. We are not interested in trying to debate or re-debate those particular issues. I think they are the basis of our hearings. We know that there is a role that is an important role for the State and local community. Let us assume that as the basis.

But on the Federal role, I note that you have been highly critical of the fact that we have seen significant cutbacks in the support of education. I would just be interested in your assessment about what the impact has been on students over the past years. What do you find from talking to your teachers has been the impact of the reduction of the funding for various programs in education? We have heard from the Secretary where the total amounts of money have been increased. But there is no question that the Administration has proposed significant reductions, as has been pointed out earlier in the hearing. A lot of that has been reversed in the Congress, but still, there has certainly been a diminution.

I am wondering if you could tell us what you are hearing from the teachers about the impact of that diminution on the lives of many of these students.

Ms. FUTRELL. I will be very happy to. What we are hearing from the teachers across the country is that the budgets proposed by the Administration have had a very negative impact on the schools—a negative impact from several points of view. As a result of not having those dollars, programs have oftentimes either been reduced or totally eliminated. Therefore services are not available to children who need those programs.

We have seen an increase in the number of students in various classes. In some areas such as Chapter I, we are not servicing as many children in 1986-87 as we serviced in 1981 even though, if you look at that line item, 1980 versus 1987, it appears as though the number of dollars increased. But we also have to realize that the costs of implementing the program increased right along with that, and we are not servicing as many children as we were before. Before this Administration came into office, we were servicing something like 55 percent of the children who had been identified as needing help. We are now servicing approximately 45 percent of the children who have been identified as needing assistance through the Chapter I program.

We are finding that in many instances, the funds have been cut. Therefore, we do not have services available to help children who need the breakfast program or the lunch program. For many Americans that might be very difficult to believe or to accept. Many might say, "Well, that is the responsibility of the home." And we would not disagree. However, we do have large numbers of children coming to the schools every day who have not had breakfast, who will not have lunch, and the only decent meal those children will receive will be the one they receive in school.

I can assure you as a teacher of more than 20 years in the classroom, when a child comes into your class, and he or she has not had breakfast, and they know they are not going to get lunch, and they do not know where they are going to get dinner, they are not

thinking about learning. So that has a very negative impact on the schools.

If we look, as I said a moment ago, at what has happened at the post-secondary level, the number of dollars available to help young students who are academically equipped to succeed in college but do not have the money, has caused us to see a decline, especially in the number of minority children going to college.

If affects whether or not we are able to keep up with technology and research, because oftentimes the funds are not there. And so what the school districts will say is, "If we do not have the money, then we will not buy the necessary equipment, even though we would like to be able to do that."

And so in human terms, the impact has been very devastating, as well as in programmatic and service terms as well.

The CHAIRMAN. Ms. Vaughn?

Ms. VAUGHN. I have to share the sentiments of Ms. Futrell and her assessment of what the impact has been. It is even more crucial on a local level when you visit the classroom teachers to find out how things are working, to discover programs that have been developed by persons other than the classroom teacher, without input from the classroom teacher or consultation; that teachers are informed that they are required to initiate a program on Friday, beginning the following Monday; and that four or five weeks later, they will be expected to test the students on whether or not these concepts have been learned. In fact, what happens in many, many schools is there are inadequate supplies, inadequate equipment, and not enough time for staff development between the administrators and the teachers to prepare for, to develop those programs.

Then parents are frustrated because their children are not achieving at the level of expectations; they blame the teachers for doing a poor job of teaching. The teachers are frustrated because they are not given a fair chance for input, or not consulted to find out if suggested programs really will work better than existing programs. Nobody bothers to give them the respect or the dignity or the kind of professional input that other professions enjoy.

We also are concerned that while there is a great deal of emphasis and attention on public education which has been generated by the reports across the country during the first part of the Eighties, that everyone has a recommendation, but no one is willing to fund it to the level necessary to carry such programs through, and at the same time, the so-called experts are looking for instant results. They say, "well, three years ago, we gave you $50 billion to develop a program. We do not see the results." We must point out that it took years for the program and the education system to deteriorate It will have to take a few more years to have a good program developed, with input from those people who are required to implement it and then put into place and work with exchange and ongoing training and exchange between administrators who are taught to be administrators as well as teachers who have the kind of time for preparation.

The CHAIRMAN. Does it make much sense to cut back on those school breakfast and school lunch programs? I had the opportunity last year in Missouri to visit some of the caves out there, caverns the size of this room, that just run for miles, filled with surplus

food, which is being preserved. But there is obviously a certain amount that deteriorates and is being lost and wasted. And we see the recommendation now that we ought to reduce the support that provides these few cents a day to provide some nutrition in the schools, particularly those that serve the disadvantaged population, or the at-risk groups, rather.

And the argument is made that, well, there is no sense in subsidizing children of middle-income and low-income people—the break-off point is about $20,000 of income. I think most families are hard-pressed—they are in my State—at $20,000 a year to make ends meet under the best of circumstances.

And I am just wondering what you would tell us about the reduction in funding of programs for nutrition in the public school system, and what the impact of that will be.

Ms. Vaughn?

Ms. VAUGHN. I think the impact will be devastating because as we all know, a hungry child cannot focus on education——

The CHAIRMAN. And is this a reality? I mean, why don't you just spell it out.

Ms. VAUGHN. Absolutely. When young people come into the classroom who have not had breakfast, or who may have only been able to have a bite off of a candy bar, which is not breakfast and is not nutritious, they cannot have long attention spans. They do not seem interested in what the teacher is saying or what kind of programs are being developed.

In reality, there are many school districts where young people, in addition to not having eaten, have problems with having to pay "ransom" to get to school. They live in highrises. They have to pay to come down on an elevator to get to school.

I was talking to a class one day, and I was shocked to notice that everybody was paying attention except one little boy. When I asked what was the problem, he said, "Teacher, I am trying to figure out how I can get a dime."

And I said, "Why do you need a dime?"

He said, "I have to pay a dime to get up on the elevator when I go home for lunch." And he had to pay a dime to come down.

I can assure you if he has the problem of not being fed and having to find a dime to get on the elevator, his concentration and his ability to perform well are certainly hampered.

Certainly, lack of nutrition diminishes the ability to do the best on any task that is given by a teacher.

The CHAIRMAN. Ms. Futrell?

Ms. FUTRELL. Let me respond by saying that I agree that it would be absolutely devastating if we decided to eliminate programs providing breakfast and/or lunch to many of the children in our country. Many people have forgotten that the reason we have the programs in the schools is because during the Second World War, when many of our young men went into the military, it was discovered that they were physically deficient. One of the ways to help them was to implement these programs. What we discovered was that not only were these young people deficient, but so were others, and so we decided to keep them in.

We also have to look at the fact that we have studies, a number of studies, which show that there is a direct linkage between nutri-

tion and the ability to learn. When we look, for instance, at many of the newborn babies, we know that those who are born underweight and with malnutrition tend to have more difficulty learning.

We also have to consider, Senator, that while we have about 40 percent of our children today in need, by the turn of the century, it will be about 60 percent. So instead of these numbers going down, they are going to go up. We will have more children in need.

As I testified a moment ago, I have been a teacher since 1962, and most of the children I taught were children from poor-income areas. And it was heart-breaking to see children come to school hungry. I grew up in a poor neighborhood, but I never went through what many of my students experienced. For many of them, breakfast would be a soda pop; for many of them, breakfast would be a bag of potato chips, and that would be the same thing for lunch. That would be all they would have. I would certainly not call that nutritious.

They come into your classrooms, and they are sitting there. They are irritable. They are not focusing on the lesson. They are not concentrating. So I think it would be absolutely devastating. And if that is one way to help the children make a better adjustment and hopefully help them function more positively in school, I would say let us give them the food.

The CHAIRMAN. Let me focus, if I could on the at-risk students and the dropout programs. About one in three students drop out. It is higher in different communities, dramatically higher in some communities; it is higher in various groups, different groups, for a wide variety of different reasons.

Do you think that we should be more aggressive in attempting to deal with this real national problem—and it is a national problem.

Ms. FUTRELL. I think that we as a Nation have no choice but to address the problem and to address it as a national priority. We cannot afford to lose one million children per year, and that is what we are losing now; nor can we afford to see——

The CHAIRMAN. One million children are dropping out?

Ms. FUTRELL. One million children drop out of school each year, and another 350,000 are chronically truant each year. We have to ask ourselves as a society can we afford to continue to allow that to happen.

Unfortunately, the situation appears to be increasing instead of decreasing. For example, I was talking to some teachers from Louisiana this past week. Louisiana three years ago had the highest dropout rate in the nation, around 43 to 45 percent. That rate is now above 50 percent statewide; 50 percent of all the children drop out.

We have some local school districts where we are losing 50, 60, 70 percent of the children—for the black children, 75 percent; for the Hispanics, 85 percent—and yet, all the studies show that the Hispanic children and the black children are going to increase much more dramatically in numbers than any other group in our population.

These are the children who are the least well-served. The NEA voted two years ago, Senator, to put into effect a program to try to help teachers assist the local school community address this prob-

lem, because we are very concerned about it. The program is called Operation Rescue. We set aside one dollar from each member—$1.8 million—to address the problem. The effort is to try to get the total community involved in helping us realize the seriousness of the problem, and to develop strategies to try to address the problem.

We were astounded when almost 1,000 local school districts through the Association applied to be part of that program. So they see it as a real problem.

We think in terms of the money we lose because these individuals cannot find decent jobs. Many of them, 60 percent of all the men in prison are high school dropouts. So it has a devastating impact——

The CHAIRMAN. And teenage pregnancy?

Ms. FUTRELL. Teenage pregnancy is just as bad. One million young girls get pregnant every year; 500,000 decide to give birth—most of them today decide to keep their children. When I was coming up, most of the girls would give the children away, but they do not do that anymore. And so we have children raising children, and we repeat the cycle.

In addition, the teenage pregnancy problem is directly related to the dropout problem. Eighty-five percent of the girls who get pregnant drop out of school. Most of them end up on welfare. Forty percent of the young men who become teenage fathers drop out of school. And so we have a double-edged sword here, all having a very negative impact on the society and on the individuals.

Ms. VAUGHN. I have to agree. I think that one of the other problems that we have found in our area about the dropout problem is that we have to start in the elementary schools as early as the second and third grade, because we have found through our studies and research that the young person who is capable of becoming a dropout at the high school level can be identified at the elementary level, and that our attention and our counseling programs have to focus in on addressing those problems at that age.

In addition, we like to compare or note what has happened in the so-called "model system". When young people get into "the best" high school, it assures them that at the end of their completion of training in high school in the Japanese school system, that there will be job opportunities for them. That is not a guarantee that we can offer to our young people in the public schools. And when we talk with young people who are dropouts, they say to us, "Why should I go to high school? When I get out at the end of the term, there is no job for me. I cannot get a job in a fast-food chain; I cannot get a job in a technology industry. So what is the point of my going to school? I am going to be unemployed anyway. I might as well get a head start on the others by dropping out."

Also, the requirement for immunizations and health programs, which means that if you do not have the immunization by a certain time, these students are required to go home and not come back without their parents.

If, at the high school level, you have a person who is reluctant to go to school in the first place, being told that, "By October of the school year, if you have not gotten your immunization shots, then you cannot come back to school," that is the excuse they have for dropping out. And they say, "Well, the school told me not to come."

They cannot afford to pay the costs of getting the immunization at a private carrier. And so some schools in our city have initiated what they call health clinics. They received a great deal of publicity because one component of the health clinic was to give training and information about birth control, and most of the emphasis was focused on that, so that generated a great deal of controversy.

But the clinics themselves provided an opportunity for high school students to get immunization, to get physical checkups that they would not normally get because their parents did not have the training or the ability or the money to pay for those kinds of things.

So it is a very complex problem that cannot be ignored. It is one of many, many problems in addition to those social problems that affect student achievement—the presence of drugs, the gang-related activities—all of these problems have to be addressed, and it is not just in the education community, but the parents, the religious community, business community—everyone has a responsibility to try to come together to save public education in addressing all of those problems at the same time.

The CHAIRMAN. Senator Stafford?

Senator STAFFORD. Thank you, Mr. Chairman.

Mary, let me start by saying "Welcome." And then, since you brought up the question of the cuts proposed by this Administration in higher education, I wanted to take this opportunity to say that in my judgment, the effort that I am prepared to make and that I am sure the Chairman of this Committee and the Chairman of the Subcommittee on Education, Senator Pell, is prepared to make, I do not expect any of those cuts to actually occur, either the recision in programming for funding of higher education in this fiscal year, nor the cuts that are proposed at a level of $4.5 billion in the next fiscal year.

I say that to you and to anybody else who is interested, because I do not want to see another fall of turbulence in which students, administrators and parents do not know whether or not the funding will be there to allow them to go to college.

So, as emphatically as I can say it, I will say: The money will be there; if you are a student and worried about it, plan to go to college next fall. Federal assistance programs will be available to you.

Ms. FUTRELL. Senator, let me on behalf of the members of the National Education Association thank you for that commitment. And I would like to thank you and Senator Kennedy for your very, very strong support for education—elementary, secondary and postsecondary. I must honestly say that because people like you are here, we are encouraged that the proposals will not go through. We deeply, on behalf of the members of the profession and the children, thank you for your commitment.

Senator STAFFORD. Thank you.

Now, getting to elementary and secondary education, let me say equally emphatically that we are not going to eliminate the vocational education program without a chance to work that over, and I believe we will be able to keep that one, too.

The CHAIRMAN. Keep going, Bob. You are doing well. [Laughter.]

Senator STAFFORD. That covers it pretty well. But you do inspire me to offer one final thought, and I will. That is that I have sup-

ported the military appropriations to keep our Defense Department in place over the years as the Congress has provided the sums, and I will do that again this year. But to me, education is so important that I feel that an Administration that proposes to increase the military budget by $32 billion next year, while cutting all money for education on the part of the federal government by $5.5 billion to a sum that is less than half of the proposed increase for defense, has somehow got its priorities out of line.

Now back to what we are here to talk about. Could you make any suggestion to us, Mary or Jacqueline, on how the Federal government might help you to encourage parents to be more involved in their children's education?

Ms. FUTRELL. Let me comment on two things. First of all, we strongly support the fact that the nation needs a strong military system, but we also believe very strongly—and this is not a new quote—that the strongest defense is education. The two must go hand-in-hand.

Let me address the point which you raised regarding parental involvement. One of the best ways to encourage parents to be involved in the education of their children—and it is absolutely critical that they are involved—is for the Administration, members of Congress, members of the private sector, along with the members of the education community, to do more to reach out to parents, to encourage them to participate in the education of their children.

Studies show that only about 23 percent of the parents ever visit the schools. That means that about 77 percent, once these children are enrolled, do not come back; many do not even show up for graduation.

And yet, as we look at the Japanese system, which we were talking about earlier today, we see a strong level of support for education coming from the family and especially from the mother and the father.

I believe that parents are the first teachers. I believe that what children learn about education before they ever walk into a school, to a large degree, will shape their attitudes about school and whether or not they are going to try their best.

I believe that parents can do many things to help children. I realize that some will say, "But things are so different today as opposed to when I was in school." But they can go to the school and work with the teacher to find out how they can help their children. It is just a matter of going up and introducing yourself to the teacher letting the teacher know how to get in contact with the parent, knowing what activities are taking place and volunteering to help. All of those are encouraging signs not only to the teacher and to the school, but also to the child. If the child witnesses the parents being involved in education, that sends a message. And the message it sends is that education is important. If the child hears the parents talk about education or sees the parents reading or writing or whatever, that sends a very important message.

So by talking about it, the President, the members of the Cabinet, the members of the Senate, the House, all levels of government, private citizens—and by getting involved, that sends a very strong message. Programs should encourage parents to come in. In Chapter I, we have the advisory committee which said yes, you will

have the program, but you must involve parents. We said the same thing in Public Law 94-142—yes, we have the program; you must involve parents.

So what we said to those parents was, "You have a very important role to play. We want you to know about the program, and we want you involved."

So those are just some of the ways we can get parents involved.

Senator STAFFORD. Thank you very much.

Ms. Vaughn?

Ms. VAUGHN. Senator, on behalf of the American Federation of Teachers, I would like to thank you and Senator Kennedy for the efforts you have made in the past and your commitments to make sure that public education is funded to the level that is necessary to make us go forth and be competitive.

And in terms of getting greater parent involvement, that is one of the keystones of our local initiative, and one of changing attitudes about the relationship between the parent and the school. In addition to reaching out, we should let them know that it is important that they do have a role, and what they have to say is important, and by preparing programs which show them.

We have another program where we meet on a monthly or bimonthly basis with representatives of various parent and community organizations, to keep them apprised of what is happening at the educational level and the national and State and local, and telling how they, who are very effective in a legislative lobbying effort, can be helpful in saving programs that will affect their schools, and writing to their elected officials and telling them how it will impact on them, and getting involved at the local level by coming into schools regularly to pick up report cards, to meet with the administration, to find out what is it I can do at home to help my child, and how can I help rid the community of undesirables who threaten the safety of my children going to and from, and what can I do to provide the kind of nutrition that is necessary—if I cannot afford to do it, are there any agencies that I can go to that will help me—and finding jobs for them, and giving them roles to play that give them a little feeling of respect, also.

So it is a mutual attitude of engendering respect and giving respect and gaining respect. I think that if we do all of the things that both of us have said here, that education will be going into the 21st century with young people who are prepared to be competitive.

Senator STAFFORD. Thank you both very much indeed.

Thank you, Mr. Chairman.

The CHAIRMAN. Just one final comment, on these alterations or changes in the Administration's proposal about the loan programs which, hopefully, will be discarded in preference for a full commitment to the continuing loan programs, given what the projections are for new opportunities and new jobs. We have seen in the Bluestone study that six out of ten are below the poverty level—I am sure every young person thinks he is going to achieve the golden star. But we have to ask ourselves whether a lot of the young people are going to be willing to indenture themselves to higher education and increased tuitions, when the job market in the future is so uncertain.

All of us are hopeful that we can alter and change that view and that vision, and it is certainly a part, I think, of our responsibility at every level—the private sector, in the State and local communities. But this kind of indenture should that loan program ever go through, I would think would have an enormously dampening effect on millions of young people with talent and creativity and imagination and leadership.

I do not know whether this is something that you have thought about as well.

Ms. FUTRELL. Let me just comment, Senator, by saying to you that I am one of those poor children, or at least, I was a little while ago. I had the academic ability to go to school but I did not have the money, because my family was extremely poor, single-parent, mother working three jobs, and she herself was a dropout.

But one of the things that she constantly said to us was, "I do not want you to have the kind of life I have had, and the best way to get out of this is to get a good education. And that is number one."

We did not know where I would get the money to go to college. Fortunately, when I graduated from high school in the 1950s, there were grant programs available which allowed me to go to school. I realized then, it had been instilled in me, that if I received a good education, I acquired the necessary skills, I could get a job.

We have to say those same kinds of things to children today—that dropping out of school does not solve the problem; it exacerbates the problem. If you stay in school, get a good education and hopefully go on to college, or even if you do not, just get a good high school education, you will be in a better position to compete for the jobs which will be there.

On the way over this morning, I picked up an article which said that the jobs of the future will require more than a high school education. So what we have to say to our young people is you must not only stay in school and get a good high school education, but try to go to community college, try to go to some kind of technical school, try to go to college or somewhere you can get some additional skills.

Being poor does not mean that you cannot learn or you cannot be productive. It simply means that you need more help in taking advantage of the opportunities. And that is what I think you are trying to do when you put forth programs like the Pell Grants, et cetera. You are trying to say to them: These opportunities are here, but you must take advantage of them.

Ms. VAUGHN. I would like to add one other component, and that is the need for developing a partnership with the business community and industry and the local school agency.

The CHAIRMAN. Yes.

Ms. VAUGHN. In assessing the graduates that are coming out of the public schools, we are hearing often from them that the graduates do not have the skills that are necessary to do an effective job. We are saying that we want them to become more involved on the local level, and that is, by coming in and identifying the skills, giving in-kind contributions and providing consultants and training and saying these are the kinds of skills that we will be looking for; you need to reassess your curriculum, adapt the curriculum—that

means the local boards of education and the higher education institutes must change the curriculum to address the new needs that the community would like, so that when we do graduate young people from high schools or vocational training institutions, they will have skills that are necessary and marketable.

The CHAIRMAN. Thank you very much. We will be calling upon you frequently in the days and weeks ahead.

Senator STAFFORD. Mr. Chairman, before they leave could I just point out that Senator Pell and I do intend to address the dropout issue in legislation this year, and we will be consulting with you further.

Ms. FUTRELL. We will be very happy to provide you information and support. Thank you.

Ms. VAUGHN. Thank you.

The CHAIRMAN. Thank you both very much.

Our fifth and final panel represents the host of new creative and often bold ideas for improving the performance of our schools.

Robert Wagner, Jr., is the President of the New York City Board of Education, New York City, which has launched a number of innovative experiments with inner-city schools. We are pleased to have Mr. Wagner here to tell us about them.

Robert Taggart, the Director of the Remediation and Training Institute, will discuss the Ford Foundation's Comprehensive Competence Program, the CCP, which has shown great promise in teaching the basic skills of reading, writing and mathematics.

David Knapp is President of the University of Massachusetts and Chairman of the Massachusetts Corporation for Educational Telecommunications. This corporation plans to link the schools of New England together by satellite so our best teachers will be available to all of our students.

And our distinguished Mayor of the City of Boston, Ray Flynn, will discuss exciting new efforts in Boston to deal with some special needs of our students. We are particularly glad to welcome our Mayor, who has been a good and valued friend and has been tireless in his commitment to strengthening our educational system in the City of Boston.

I will ask Bob Wagner to proceed first. Bob, it is nice to have you here.

STATEMENT OF ROBERT F. WAGNER, JR., PRESIDENT, NEW YORK CITY BOARD OF EDUCATION; DR. ROBERT TAGGART, DIRECTOR, REMEDIATION AND TRAINING INSTITUTE; DR. DAVID C. KNAPP, PRESIDENT, UNIVERSITY OF MASSACHUSETTS, AND CHAIRMAN, MASSACHUSETTS CORP. FOR TELECOMMUNICATIONS; AND RAYMOND FLYNN, MAYOR, BOSTON, MA

Mr. WAGNER. Thank you very much, Senator.

Let me begin by saying that there has been a tendency in recent years to talk about urban schools as total failures and a tendency, as a result of that, to give up on what those schools can do. And the truth is, there are dazzling successes, sometimes, where you do not expect them in a school system like New York City's.

Sixty-six percent of our students are doing math above grade level; 62 percent are reading above grade level. Yesterday I was

with Secretary Bennett in the South Bronx, at a school sitting in the middle of devastation, where youngsters in the third through sixth grades are studying Shakespeare and learning about various operas, including some I had never heard about.

We have a zoned high school—not one of our specialized high schools—Cardozo High School in Queens, which had more Westinghouse semifinalists than the entire State of California.

So that even though there are enormous problems in an urban system, there are also strengths to build on in ours and others around the country.

There are also tremendous problems, the greatest being the dropout problem. One out of every three youngsters starting in our high schools fails to finish. Today, dropping out of school is the same as dropping out of society. And the issue involved is in many ways not simply the future of those youngsters and the future of the city's economy, but the basic social fabric of New York City itself.

What we have tried to do in New York over the last several years is to some extent catch up with the rest of the country and also to recognize that what happens to the city and its future will depend on what we do in our schools; we have also recognized that there have been good things going on and lessons to be learned from the past. On that basis we have developed an agenda for our future, with particular emphasis on pre-kindergarten, and with the hope that by 1989, all youngsters in the city aged four whose parents want them to go to school will have that opportunity. I think clearly, the pre-kindergarten programs have been working—that has been shown from the Head Start reports, and the Ypsilanti reports.

In addition we have attempted to bring community-based organizations into the schools, to help the many of our at-risk youngsters who come from single-parent families, who come from neighborhoods with little social structure; So far our experience of the last two years is a very positive one, and I am hopeful that in two weeks we will announce a dramatic improvement in the dropout rate in the City of New York.

We have recognized that not just linking schools to the business community, but linking those schools to the world of work, can make a tremendous difference.

Just as one example, we have a high school in Queens that had an 85 percent dropout rate ten years ago. We made it a co-op education school where youngsters not only could work and study at the same time, but had to work and study at the same time. Today, 85 percent of those youngsters are graduating—dramatic and very clear progress.

We have learned that for many of our youngsters, alternative settings, smaller classes, smaller buildings, can make a difference. Alternative schools I think, point the way, particularly in how to deal with at-risk youngsters into the future. I think we have learned from other places, and it will be a difficult struggle for us in New York. Changing the way schools work, changing from the factory model to a professional model is a way of getting the best out of teachers and creating an atmosphere where learning can take place more effectively in the future.

These are some of the areas in which we have been working. Obviously, in terms of our funding, the vast bulk has come from State and local government, and that is going to be the case in the future; however, the Federal government's role is also tremendously important—important in terms of Title I and its continuing and, from our point of view, seeing that greater flexibility be brought in. It is our belief that this collaboration has worked. We have 20 years of experience. Our reading scores are up, particularly in the neighborhoods where Title I funds have gone, and I think for us it is very important that it continue; that it be given to localities in a way that they have greater opportunity to let the schools use the dollars in creative ways, making the schools the focus of what the system is all about.

And just briefly, because I think I have gone over my five minutes, I will run through four other notions that for us would be very helpful in terms of federal government action over the next several years.

Students with limited English proficiency—forty percent of youngsters starting in the first grade of New York come from families where English is not spoken—not simply a New York problem; to some extent, a by-product of Federal immigration policies, of immigration enforcement failures, and a problem exists for many of the other urban school systems around the country and one that is of tremendous importance to us.

Technology and demonstration grants would allow us to look at the use of technology, including computers, in more creative ways than we have in the past, and would be particularly helpful to those at-risk youngsters who do not respond to a normal classroom setting but who we believe might well respond to different kinds of learning devices using technology.

Third, re-looking at the role of land grand colleges which receive a large portion of their funding from the federal government, particularly the extension part; making extension services more related to the real social needs that are there today rather than to the needs of 40 years ago when the focus, appropriately for that period and the period before that, was on agriculture.

And finally, an idea that has been discussed here before—the notion of a teacher corps; using retired teachers; using youngsters between undergraduate degrees and graduate degrees; and using youngsters in post-graduate degrees with forgiveness of loans in return for coming into the school system from two to five years; each may prove to be a way of dealing with the shortage that is going to face us—we face the possibility of a 50 percent turnover in teaching staff in the next ten years—but even more than that, as a way of attracting the very best and the brightest into our schools to teach our youngsters.

The CHAIRMAN. Thank you. You mentioned two of the four, I think—or, did I lose track?

Mr. WAGNER. No. I went through them very quickly. The first was dealing with the issue of students with limited English proficiency; second, the use of technology and demonstration grants; third, re-looking at the role of land grant colleges, and fourth, the notion of a teacher corps that would apply to three different groups.

The CHAIRMAN. Good. Thank you.

Dr. Taggart?

Dr. TAGGART. Each year about one million youth leave school without the minimum basic skills they need, and these skills deficiencies are the cause of almost every social problem and economic problem our nation faces.

Among the last cohort of school-leavers, the 19- to 23-year-olds at the beginning of this decade who are our next generation of breadwinners, family heads and citizens, half of the poor, half of minorities, half of unwed parents, half of welfare recipients, two-fifths of those who were idle, and two-fifths of those who were arrested in the previous year came from the bottom one-fifth of the skills distribution of all young Americans.

Basic skills are required more than ever before in the labor market. If you were a high school dropout in the early 1960s and a male, you could expect to earn one-third less than a high school graduate. If you were a high school dropout in the 1980s, the differential was almost two-thirds.

Unfortunately, there are also many graduates who leave schools without the basic skills a diploma would suggest. Though dropouts account for half of all those young people who were in the bottom fifth of the basic skills distribution, graduates make up the other half.

Minorities and youth from poor families have caught up in educational attainment, but the gap in educational achievement has changed hardly at all. For instance, 72 percent of blacks will graduate from high school compared to 83 percent of whites—a gap of 11 percentage points. But if you ask how many will graduate with the skills the military considers to be the minimum for trainability, it is only 14 percent of blacks versus 63 percent of whites—a gap of 49 percentage points.

Skills are what matter most over the long run, and a graduate with below-average skills will earn less than the dropout with above-average skills.

Black graduates earn less than white dropouts. Not surprisingly, black graduates have lower basic skills on average than white dropouts do.

Regression equations which try to sort out these effects find that schooling increases earnings 14 percent for every year more you go to school, plus 18 percent if you get a diploma. But each grade equivalent of tested basic skills will pay off 4 percent in the labor market year after year after year net of these educational attainment and credentials.

Regression equations show that each grade level, better basic skills at age 19 is associated with a 5 percent reduction in welfare recipiency, a 7 percent reduction in teen pregnancy, and a 6 percent reduction in arrests among 19- to 23-year-olds.

But skills deficits are also a primary reason why young people drop out of schools. We can worry the other reasons but they are largely unchangeable, and when you are 16 or 17, or 14 and 15, and you lack basic skills, the fact is that you are likely to drop out. Among 16- to 17-year-old students with ten years of schooling who were in the bottom fifth of the skills distribution, their chances of

dropping out were 50 percent in the next two years, compared to 3.5 percent for those in the top fifth.

The CHAIRMAN. Dr. Taggart, I want you to focus on your program. We are familiar with the problems.

Dr. TAGGART. We have a tool that can help solve the basic skills crisis. Our program is called the Comprehensive Competencies Program, or CCP and what it has done is to pull together all the things which you have heard to be successful in education. It was developed with the support of the Ford Foundation.

The CHAIRMAN. Just tell us in your own words what you are doing. We are roughly familiar with it.

Dr. TAGGART. What we have is a system that is used to establish "one-room, high-tech schoolhouses." It is a system of tests, competency standards, lesson assignments, automated software, ways of using computer-assisted instruction. The one-room schoolhouses can be sited in regular public schools, secondary schools, can be put in correctional institutions, can be put in community-based organizations, or almost anywhere, and deliver basic skills instruction to young people, to pre-teens, to older people and displaced workers.

We have 200 learning centers around the country. Those 200 learning centers serve around 15,000 people. We are adding 100 learning centers a year. Those learning centers are achieving basic skills grade gain improvements of about four grade levels per 100 hours of instruction in reading, and about five and one-half grade levels per 100 hours of instruction in math. All those who lack basic skills can be and are being taught, and the CCP learners include solo parents, welfare mothers, displaced workers, those who have dropped out, the learning-disabled—it includes everybody in our society who needs to read, write and compute.

The system is transportable. It has been put in place in almost every State in the Nation. It is in New York City; it is all over Massachusetts; it is in Boston. This system can work nationwide, and there are ways within existing authorizations to put this tool to use.

The Ford Foundation supports it. It is nonprofit. It is available. It works. And what we are hoping is that Congress will use its legislative leverage to put it in place nationwide.

The CHAIRMAN. All right. Now tell us just in terms of a particular school district that has some young people who are in danger of dropping out, who are having difficulty in developing either language skills or other kinds of basic skills, reading and math. Walk us through a little bit what happens to that individual in areas where you are experimenting with this program at the present time.

Dr. TAGGART. We are experimenting most comprehensively. In some areas we have learning centers inside schools. We also have learning centers in community-based programs and recreation centers outside schools.

A young person might go during the school year and get his compensatory education, two hours a day, in a school-based learning center setting. He or she might go on weekends to a community-based organization or recreation center to play basketball where learning is built into the activity.

The CHAIRMAN. Well, how does this work? How is it different? Describe it.

Dr. TAGGART. How it differs is that when they go into one of these learning centers, it is not group classroom instruction; it is individualized. Each one learns at his own pace. They have individual prescriptions. They are tested on a regular basis. They have a lot of one-on-one tutoring. They have a lot of computer-assisted instruction with the help of high technologies. They know what they are to learn. They get supportive services while they are learning, and they therefore spend more time on tasks than they do in a regular school and gain at a faster rate.

If it is combined with summer work programs, we have found that young people can make up a half grade level to a whole grade level during the summer months, instead of what they normally do—falling behind a grade level during the summer months. So what we recommend is programs in school plus programs after school and weekends, plus programs during the summer months, just like the Juku academies you heard about in Japan; but targeted for those who are otherwise going to fall behind.

The CHAIRMAN. Finally, what does it cost per pupil?

Dr. TAGGART. The cost to date is $600 per tested grade gain, which is about one-half of the cost of regular education.

The Chairman. Thank ycu.

[The prepared statement of Dr. Taggart and responses to questions submitted by Senator Kennedy follow:]

SOLVING THE BASIC SKILLS CRISIS

Testimony of Dr. Robert Taggart*

President, Remediation and Training Institute

Senate Committee on Labor and Human Resources

January 14, 1987

---

*Testimony is based on series of research papers with Andrew Sum of Northeastern University's Center for Labor Market Studies and Gordon Berlin of the Ford Foundation.

SUMMARY

EACH YEAR OVER A MILLION YOUNG PERSONS LEAVE SCHOOL WITHOUT THE MINIMUM SKILLS NEEDED FOR SUCCESS IN THE LABOR MARKET, HOME AND COMMUNITY-- THEY CANNOT READ, WRITE AND COMPUTE AT THE HIGH SCHOOL ENTRY LEVEL AND THEY CANNOT HANDLE EVERYDAY TASKS LIKE WRITING A RESUME, READING A BUS SCHEDULE, INTERPRETING A CONTRACT, OR UNDERSTANDING WRITTEN INSTRUCTIONS ON THE JOB. THE DIMENSIONS OF THIS "BASIC SKILLS CRISIS" HAVE BEEN DOCUMENTED BY SCORES OF COMMISSIONS AND TASK FORCES OVER THE LAST DOZEN YEARS. THE ARGUMENTS AND AGENDA FOR ACTION ARE CLEARCUT:

1) THE BASIC SKILLS CRISIS HAS SEVERE SOCIAL AND ECONOMIC CONSEQUENCES.

ALL OF US WHO HAVE STOOD IN LINE WAITING FOR A CLERK WHO SEEMS UNABLE TO MAKE CHANGE OR FILL OUT AN ORDER FORM, WHO HAVE GIVEN INSTRUCTIONS TO EMPLOYEES OR COWORKERS WHICH ARE NOT FOLLOWED, WHO GRUMBLE OVER THE TAXES WE PAY FOR WELFARE OR CRIME, OR WHO ARE DISTURBED BY OUR GROWING TRADE DEFICITS AND DECLINING ECONOMIC COMPETITIVENESS, ARE EXPERIENCING THE CONSEQUENCES OF THE BASIC SKILLS CRISIS.

BASIC SKILLS DEFICIENCIES ARE A COMMON DENOMINATOR OF ALMOST ALL OUR NATION'S SOCIAL AND ECONOMIC PROBLEMS. AMONG THE LAST COHORT OF YOUNG ADULT SCHOOL LEAVERS-- OUR RISING GENERATION OF BREADWINNERS, FAMILY HEADS AND CITIZENS-- HALF OF THOSE WHO ARE POOR, HALF OF MINORITIES, THREE-FIFTHS OF UNWED PARENTS, HALF OF WELFARE RECIPIENTS, TWO-FIFTHS OF THOSE ARRESTED IN THE PREVIOUS YEAR AND TWO-FIFTHS OF THOSE WITH NO WORK, SCHOOL OR FAMILY RESPONSIBILITIES, RANKED IN THE LOWEST FIFTH OF THE BASIC SKILLS DISTRIBUTION FOR ALL YOUNG AMERICANS.

BASIC SKILLS ARE REQUIRED MORE THAN EVER BEFORE IN THE LABOR MARKET. FOR INSTANCE, MALES WITH A HIGH SCHOOL DIPLOMA EARNED A THIRD MORE THAN DROPOUTS IN THE EARLY 1960S, BUT THE DIFFERENTIAL DOUBLED BY THE 1980S. THE PAYOFFS OF THE DIPLOMA HAVE INCREASED AT ALL AGES AND FOR ALL SUBGROUPS. GRADUATES EARN MORE BECAUSE, ON AVERAGE, THEY HAVE THE BETTER BASIC SKILLS EMPLOYERS WANT. THE AVERAGE DROPOUT RANKS AT THE 16TH PERCENTILE IN THE BASIC SKILLS DISTRIBUTION OF YOUNG ADULTS, COMPARED TO THE 40TH PERCENTILE FOR THE TYPICAL HIGH SCHOOL GRADUATE WITH NO FURTHER EDUCATION, THE 60TH PERCENTILE FOR THOSE COMPLETING TWO YEARS OF POST-SECONDARY EDUCATION, AND THE 78TH PERCENTILE FOR THOSE COMPLETING FOUR YEARS OF HIGHER EDUCATION.

UNFORTUNATELY, THERE ARE MANY GRADUATES WHO LACK THE BASIC SKILLS WHICH A HIGH SCHOOL EDUCATION IS SUPPOSED TO IMPART. THOUGH DROPOUTS ACCOUNT FOR HALF OF THOSE IN THE LOWEST FIFTH OF THE BASIC SKILLS DISTRIBUTION, GRADUATES MAKE UP THE OTHER HALF. MINORITIES AND YOUTH FROM POOR FAMILIES HAVE CAUGHT UP IN EDUCATIONAL ATTAINMENT, BUT THE GAP IN EDUCATIONAL ACHIEVEMENT REMAINS. FOR INSTANCE, 72% OF BLACKS VS. 83% OF WHITES GRADUATE FROM HIGH SCHOOLS, A GAP OF 11 PERCENTAGE POINTS; BUT ONLY 14% OF BLACKS VS. 63% OF WHITES GRADUATE WITH TESTED SKILLS ABOVE THE ARMED FORCES' "TRAINABILITY" STANDARD, A GAP OF 49 PERCENTAGE POINTS.

SKILLS ARE WHAT MATTER OVER THE LONG RUN, AND THE DROPOUT WITH ABOVE AVERAGE BASIC SKILLS WILL EARN MORE THAN THE GRADUATE WITH BELOW AVERAGE SKILLS. BLACK GRADUATES EARN LESS THAN WHITE DROPOUTS, TO A LARGE EXTENT BECAUSE THE BASIC SKILLS OF BLACK GRADUATES ARE, ON AVERAGE, LOWER THAN THOSE OF WHITE DROPOUTS. REGRESSION EQUATIONS SORTING OUT THE EFFECTS OF EDUCATIONAL ATTAINMENT, ACHIEVEMENT AND CREDENTIALS FIND THAT EACH YEAR OF SCHOOLING YIELDS A 14% INCREMENT IN EARNINGS DURING THE FIVE YEARS AFTER SCHOOL LEAVING, AND THE DIPLOMA ADDS 18% MORE, BUT EACH GRADE-EQUIVALENT IN BASIC SKILLS ALSO CONTRIBUTES 4% TO EARNINGS NET OF ATTAINMENT AND CREDENTIALS. THE PAYOFF OF BETTER SKILLS INCREASES OVER TIME WHILE THE DIPLOMA PAYOFF DECLINES, AS THE CHAFF IS SEPARATED FROM THE WHEAT IN THE LABOR MARKET.

REGRESSION EQUATIONS ALSO SHOW THAT EACH GRADE MORE OF TESTED BASIC SKILLS, HOLDING CONSTANT EDUCATIONAL ATTAINMENT AND CREDENTIALS, IS ASSOCIATED WITH A 5% REDUCTION IN WELFARE RECIPIENCY, A 7% REDUCTION IN TEEN PREGNANCY AND A 6% REDUCTION IN ARREST AMONG 19- TO 23-YEAR OLDS.

BUT SKILLS DEFICITS ARE ALSO A PRIMARY REASON WHY STUDENTS DROP OUT OR GRADUATE BUT DO NOT GO ON TO COLLEGE. AMONG 16- AND 17- YEAR-OLD STUDENTS WITH 10 YEARS SCHOOLING, HALF OF THOSE WITH LOWEST QUINTILE SKILLS FAIL TO GRADUATE IN THE NEXT TWO YEARS, OVER TEN TIMES THE DROPOUT RATE OF THOSE WITH HIGHEST QUINTILE SKILLS. REGRESSION EQUATIONS SUGGEST THAT IF 1000 14-YEAR-OLDS HAD ONE MORE GRADE OF BASIC SKILLS, THE NUMBER OF DROPOUTS WOULD DECLINE BY A SIXTH AND THE NUMBER OF EVENTUAL COLLEGE GRADUATES WOULD INCREASE BY A SIXTH.

A PRIMARY PREDICTOR OF THE BASIC SKILLS OF YOUNG ADULTS IS THE EDUCATIONAL ATTAINMENT OF PARENTS. EACH GRADE MORE EDUCATION OF THE MOTHER IS ASSOCIATED WITH 1/2 GRADE MORE SKILLS OF THE OFFSPRING; THE FATHER'S EDUCATION ADDS JUST A LITTLE LESS; AND THE ABSENCE OF A PARENT SUBTRACTS 1/2 GRADE. WOMEN WITH LOW BASIC SKILLS HAVE MORE CHILDREN. FOR

INSTANCE, THOSE IN THE LOWEST SKILLS QUINTILE ACCOUNT FOR TWO-FIFTHS OF BIRTHS TO YOUNG ADULTS, WHILE WOMEN IN THE TOP FIFTH ACCOUNT FOR LESS THAN 5%. RAISING SKILLS WOULD RESULT IN FEWER BIRTHS TO PARENTS OF LIMITED SKILLS, AND IMPROVED SKILLS A GENERATION HENCE.

2) THE SOCIAL AND TAXPAYER COSTS OF BASIC SKILLS DEFICIENCIES FAR EXCEED THE SOCIAL AND TAXPAYER COSTS OF PREVENTIVE AND REMEDIAL TREATMENTS.

IF A MAGIC WAND WERE WAVED OVER ALL 19-YEAR-OLDS, RAISING BASIC SKILLS PERMANENTLY BY ONE GRADE-EQUIVALENT WITHOUT CHANGING EDUCATIONAL ATTAINMENT, THE CURRENT VALUE OF INCREASED LIFETIME EARNINGS WOULD BE $7100 PER PERSON, AND THE REDUCED SOCIAL COSTS OF DEPENDENCY, OUT-OF-WEDLOCK BIRTHS AND ARRESTS WOULD AVERAGE $640.

IF THE MAGIC WAND WERE WAVED EARLIER OVER ALL 14-YEAR-OLDS, IN TIME TO CHANGE THEIR EDUCATION ATTAINMENT, AVERAGE EARNINGS WOULD BE RAISED AN ADDITIONAL $4400 THROUGH INCREASED YEARS OF SCHOOL AND DIPLOMAS, WHICH WOULD ALSO REDUCE DEPENDENCY, OUT-OF-WEDLOCK BIRTH AND CRIME COSTS BY ANOTHER $475 NET OF THE DIRECT BASIC SKILLS IMPACTS.

IMPROVED SKILLS FOR THIS GENERATION WOULD HAVE SIMILAR PAYOFFS FOR THE NEXT GENERATION GROWING UP WITH BETTER SKILLED PARENTS, AND THE DISCOUNTED VALUE WOULD BE $3800.

IN OTHER WORDS, THE SOCIAL PAYOFF IF THE BASIC SKILLS OF ALL 14-YEAR-OLDS WERE RAISED BY A GRADE-EQUIVALENT WOULD BE OVER $16,000 PER INDIVIDUAL. WITH MORE TAXES FROM INCREASED EARNINGS, AND WITH LOWER CRIME, WELFARE AND HEALTH COSTS, TAXPAYERS WOULD REALIZE A BENEFIT OF OVER $5000 PER INDIVIDUAL.

3) BASIC SKILLS PROBLEMS CAN BE PREVENTED AND CORRECTED.

RESEARCH HAS DOCUMENTED THAT BASIC SKILLS CAN BE IMPROVED FOR EVEN THE MOST DISADVANTAGED LEARNERS. PRE-SCHOOL EDUCATION HELPS TO PREVENT PROBLEMS. COMPENSATORY EDUCATION AND SUMMER INTERVENTIONS HELP TO CLOSE GAPS. THE MILITARY, JOB CORPS AND OTHER JOB TRAINING PROGRAMS CAN PROVIDE REMEDIATION SO THAT PROBLEMS DO NOT IMPEDE PROGRESS. ADULT EDUCATION PROGRAMS CAN IMPROVE COMPETENCIES AT ANY AGE.

THERE IS SURPRISING CONSENSUS ABOUT HOW TO BEST TEACH BASIC SKILLS. THE RESEARCH PRESCRIPTIONS INCLUDE:

- INDIVIDUALIZED, SELF-PACED INSTRUCTION
- COMPETENCY-BASED, OPEN-ENTRY/OPEN-EXIT APPROACHES
- USE OF MULTIPLE MEDIA AND METHODS INCLUDING COMPUTERS

- SELF-DIRECTED LEARNING PROMOTING LEARNER EFFICACY
- FREQUENT FEEDBACK AND POSITIVE REINFORCEMENT
- ACCOUNTABILITY OF TEACHERS AND LEARNERS
- EFFICIENT MANAGEMENT TO MAXIMIZE TIME-ON-TASK
- INDIVIDUAL ATTENTION AND ONE-ON-ONE INSTRUCTION
- SUPPORTIVE SERVICES AND LEARNING ENVIRONMENTS
- LINKAGES TO WORK, TRAINING AND OTHER ACTIVITIES

4) THERE ARE DEMONSTRABLY EFFECTIVE AND READILY AVAILABLE TOOLS TO APPLY THESE PRESCRIPTIONS IN SCHOOLS, COMMUNITIES AND WORKPLACES.

THE COMPREHENSIVE COMPETENCIES PROGRAM (CCP) WAS DEVELOPED WITH THE SUPPORT OF THE FORD FOUNDATION TO INCORPORATE RECOMMENDED APPROACHES, AS WELL AS THE BEST EXISTING INSTRUCTIONAL MATERIALS AND TECHNOLOGIES, INTO A SYSTEM WHICH COULD BE USED ALMOST ANYWHERE TO MEET ALMOST ANY BASIC SKILLS NEED. THE CCP WAS DEVELOPED IN 1983, FIRST TESTED IN 1984, AND IS NOW USED IN OVER 200 CCP LEARNING CENTERS IN SECONDARY AND VOCATIONAL SCHOOLS, COLLEGES, COMMUNITY-BASED ORGANIZATIONS, CORRECTIONS FACILITIES, JOB TRAINING PROGRAMS, UNION HALLS AND PRIVATE SECTOR WORKSITES IN 35 STATES AND CANADA. A HUNDRED NEW CENTERS ARE BEING ADDED EACH YEAR, AND CCP LEARNING CENTERS CURRENTLY HAVE AN ENROLLMENT OF 15,000 LEARNERS INCLUDING PRE-SCHOOL, PRIMARY, VOCATIONAL, SECONDARY, POST-SECONDAY AND DROPOUT YOUTH; YOUNG ADULTS ENTERING THE FULL-TIME LABOR MARKET; HIGH-RISK YOUTH SUCH AS TEEN PARENTS, YOUTHFUL OFFENDERS AND SPECIAL NEEDS GROUPS; AS WELL AS ADULT LEARNERS INCLUDING WELFARE MOTHERS, DISPLACED WORKERS AND JOB TRAINEES.

CCP LEARNING CENTERS HAVE BEEN DESCRIBED AS THE "HIGH-TECH EQUIVALENTS OF TRADITIONAL ONE-ROOM SCHOOLHOUSES." THEY ARE EQUIPPED WITH AN ARRAY OF PRINT, AUDIOVISUAL AND COMPUTER INSTRUCTIONAL MATERIALS SPANNING BEGINNING READING AND MATH THROUGH COLLEGE-LEVEL SKILLS, AS WELL AS FUNCTIONAL APPLICATIONS IN CONSUMER ECONOMICS, HEALTH, CITIZENSHIP, COMMUNITY RESOURCES AND OCCUPATIONAL KNOWLEDGE. USING THE CCP LESSON ASSIGNMENTS REFERENCING THE BEST AVAILABLE COURSEWARE FOR EACH OF THE THOUSANDS OF SPECIFIC COMPETENCY OBJECTIVES, THE HUNDREDS OF CCP MASTERY TESTS FOR PRESCRIBING AND TRACKING LEARNING, THE THOUSANDS OF PRE-STRUCTURED CCP SUPPLEMENTARY ACTIVITIES FOR HOMEWORK, EXPERIENCE-BASED LEARNING AND GROUP INTERACTION, ALONG WITH THE CCP SOFTWARE WHICH AUTOMATES ALL LEARNING CENTER FUNCTIONS, A SMALL STAFF CAN PROVIDE FLEXIBLY-SCHEDULED, INDIVIDUALIZED, SELF-PACED INSTRUCTION TO DIVERSE LEARNERS AT THE SAME TIME, YET PROVIDE A GREAT DEAL OF INDIVIDUAL ATTENTION. CCP LEARNING CENTERS THUS DELIVER ALL OF THE PRESCRIBED INGREDIENTS FOR SUCCESSFUL BASIC SKILLS INSTRUCTION. YET THEY ARE ALSO RUN LIKE SMALL BUSINESS

FRANCHISES TO MAXIMIZE USE OF COURSEWARE AND EQUIPMENT INVESTMENTS AS WELL AS STAFF IN ORDER TO ASSURE BUSINESS EFFICIENCY ALONG WITH EDUCATIONAL EFFECTIVENESS.

COMBINING "HIGH-TECH" AND "HIGH-TOUCH," CCP LEARNING CENTERS HAVE ACHIEVED BASIC SKILLS GAIN RATES OVER FOUR TIMES THE NORMS FOR SCHOOLS AND REMEDIAL PROGRAMS. THEY HAVE BEEN SUCCESSFUL WITH EVEN THE HIGHEST RISK POPULATIONS INCLUDING SOLO PARENTS, WELFARE RECIPIENTS, DROPOUTS, LOW READERS, MINORITIES, AND SPECIAL NEEDS STUDENTS. WITH THEIR BUSINESSLIKE APPROACH, THEY HAVE MAXIMIZED LEARNING PRODUCTIVITY, YIELDING A GRADE IMPROVEMENT IN BOTH READING AND MATH AT A COST OF LESS THAN $600, INCLUDING AMORTIZATION OF ALL LEARNING CENTER INVESTMENTS.

5) WITHOUT MAJOR EXPENDITURES, AVAILABLE TOOLS CAN AND SHOULD BE APPLIED NATIONWIDE TO SOLVE THE BASIC SKILLS CRISIS.

USING THE CCP, OR OTHER SIMILAR SYSTEMS, THOUSANDS OF LEARNING CENTERS COULD BE ESTABLISHED THROUGHOUT THE NATION, BOTH IN AND OUTSIDE THE SCHOOLS, TO DELIVER THE INCREASED AND IMPROVED BASIC SKILLS INSTRUCTION NECESSARY TO OVERCOME THE COMPETENCIES CRISIS. THIS COULD BE ACCOMPLISHED WITHOUT BUDGET-BUSTING EXPENDITURES, THROUGH THE FOLLOWING ACTIONS:

* ESTABLISH SET-ASIDES FOR BASIC SKILLS INSTRUCTION UNDER THE SUMMER YOUTH PROGRAM AND JOB TRAINING PARTNERSHIP ACT, VOCATIONAL EDUCATION, WELFARE, CORRECTIONS AND OTHER FEDERAL PROGRAMS.

* UNDER FEDERAL COMPENSATORY EDUCATION, MATCH LOCAL PUBLIC AND PRIVATE EXPENDITURES FOR EXTRA HOURS OF BASIC SKILLS INSTRUCTION AFTER SCHOOL, ON WEEKENDS AND DURING SUMMERS.

* FUND BASIC SKILLS INSTRUCTION ON A VOUCHER OR PERFORMANCE CONTRACT BASIS TO INCREASE COMPETITION IN THE DELIVERY OF SERVICES.

* PROVIDE LOAN FUNDS FOR CAPITAL INVESTMENTS IN COMPUTERS AND COURSEWARE WHICH WOULD BE AMORTIZED BY ALREADY BUDGETED SPENDING FOR BASIC SKILLS INSTRUCTION, INCREASING ITS EFFICIENCY AT NO NET COST THROUGH THE APPLICATION OF BETTER TOOLS.

* ESTABLISH MECHANISMS FOR THE VOLUME PURCHASE AND DISTRIBUTION OF COURSEWARE AND EQUIPMENT IN ORDER TO ACHIEVE ECONOMIES OF SCALE.

74-573 0 - 87 - 5

* DEVELOP AND PURCHASE CORE MATERIALS AND COURSEWARE IN THE PUBLIC DOMAIN TO HELP ASSURE AVAILABILITY OF BASIC TOOLS AND TO REACH CRITICAL MASS IN USE OF NEW TECHNOLOGIES.

* ESTABLISH AND SUPPORT NATIONAL AND STATE BASIC SKILLS INVESTMENT CORPORATIONS TO FRANCHISE PROGRAM MODELS, ADMINISTER INVESTMENT FUNDS, TO COORDINATE VOLUME PURCHASING AND DISTRIBUTION, AND TO DISSEMINATE PUBLIC DOMAIN COURSEWARE.

IT IS NOT NECESSARY TO FIND A MAGIC WAND TO IMPROVE THE BASIC SKILLS OF OUR NEXT GENERATION. WITH FEASIBLE MEASURES SUCH AS THESE, IT IS POSSIBLE TO DRAMATICALLY INCREASE THE QUANTITY AND IMPROVE THE QUALITY OF BASIC SKILLS INSTRUCTION IN SCHOOLS, COMMUNITIES AND WORKPLACES. ANY INCREASED INVESTMENT WILL BE PROFITABLE FOR TAXPAYERS, RETURNING OVER $5 IN TAXPAYER BENEFITS FOR EACH $1 EXPENDED. THE BASIC SKILLS CRISIS IS A PROBLEM WE CAN -- AND MUST -- SOLVE.

IMPACTS OF THE BASIC SKILLS CRISIS

Each year, a million or more young people leave school without the basic skills they need for success in the labor market, the family and the community-- they cannot read, write or compute at the high-school entry level and they cannot handle everyday tasks like writing resumes, reading bus schedules and contracts, calculating interest and unit prices, or understanding written instructions and manuals on the job. The dimensions of this "basic skills crisis" have been documented by scores of commissions and task forces over the last dozen years, leaving little doubt that we are truly a "nation at risk."

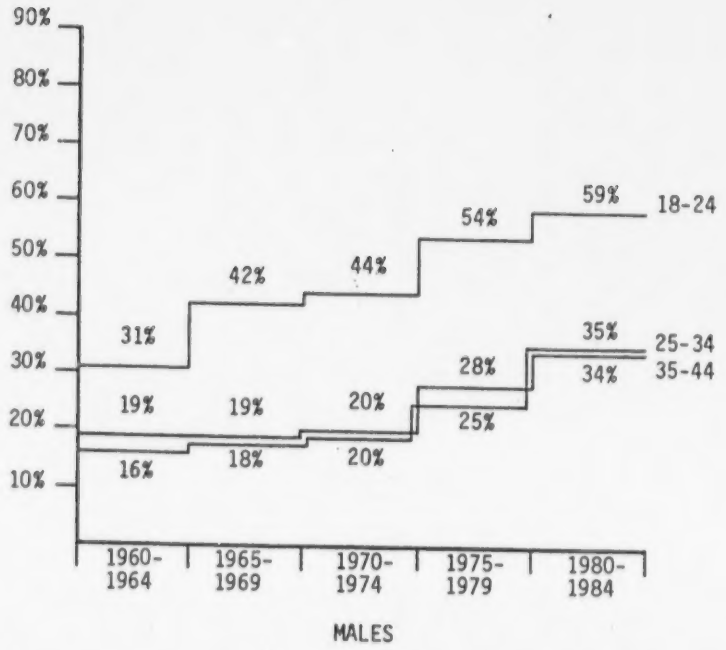
The Consequences Of Leaving School Without Skills

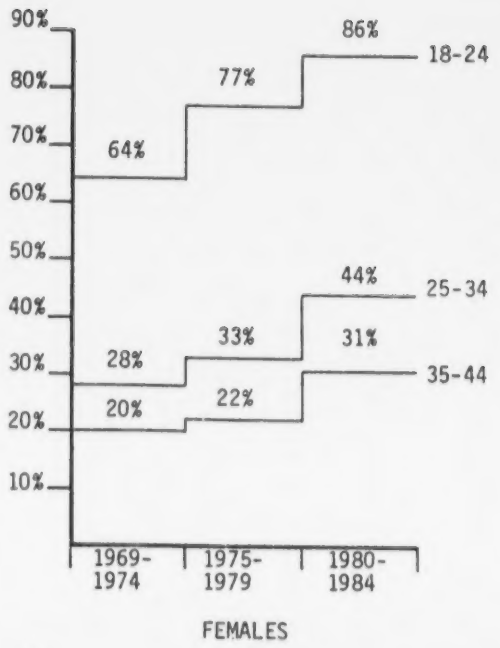
With fewer and fewer jobs requiring just a strong back or manual dexterity, educational attainment and credentials matter more than ever in the labor market. During the 1960-1964 period, male high school graduates age 18-24 had incomes a third above those of dropouts. Two decades later, the differential had had nearly doubled. (Chart 1)

CHART 1.

PERCENTAGE INCREMENT IN INCOME WITH HIGH SCHOOL DIPLOMA

GRADUATES NO COLLEGE VS. DROPOUTS SAME AGE





Similar changes were experienced by younger females age 18 through 24. After entrance into the full-time labor market, when each worker's skills can be differentiated in terms of job performance rather than credentials, the payoff of the diploma declines. But it remains significant after age 25, and the relative payoff has been increasing for all age groups over the last decades.

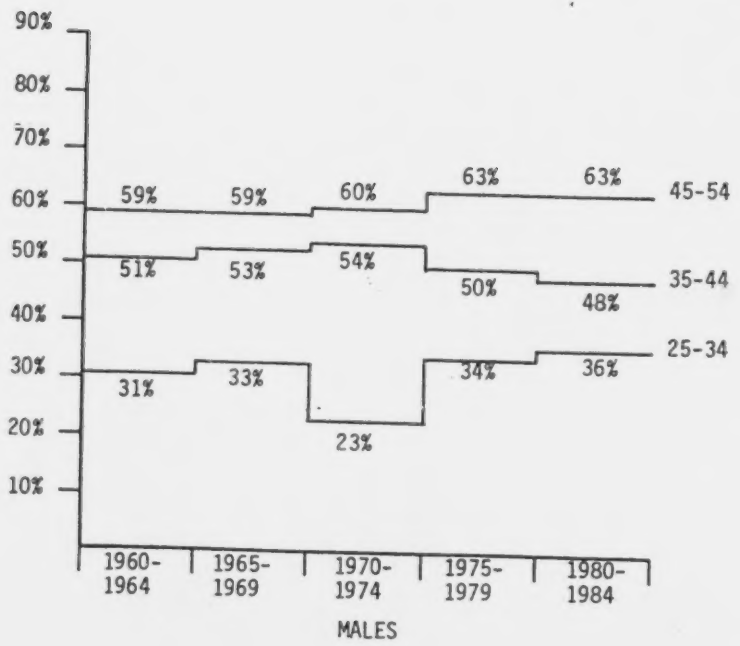
The college diploma pays off even more, and though the return has not been increasing as dramatically as that of the high school diploma, (even falling when baby-boomers got their sheepskins and flooded into the labor market at the beginning of the 1970's), college graduate males age 25-34 earned 36 percent more than high school graduate males during the 1980-1984 period, compared to only 31 percent more during the 1960-1964 period, even though the supply of college graduates increased significantly. (Chart 2)

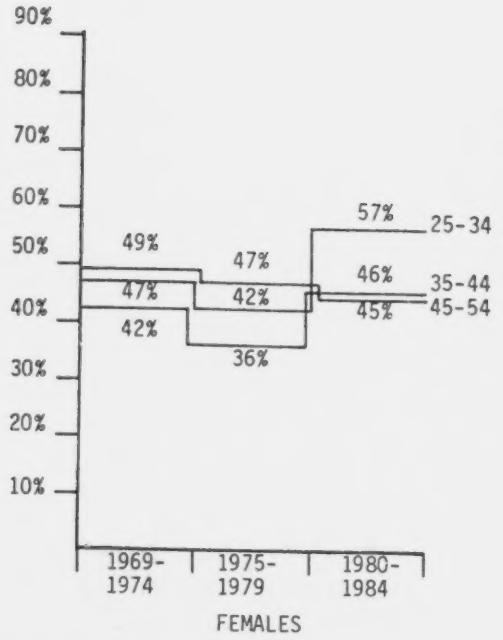
Educational attainment and credentials matter to employers because of the increased skills which usually come with increased schooling. Each year of high school raises tested basic skills by a fifth of a standard deviation. High school graduates average far better skills than dropouts, with the typical dropout ranking in the 16th-percentile of the basic skills distribution of all young adults, while high school graduates with no further education average 40th-percentile skills. College goers are more skilled than the graduates who enter the work force or assume family responsibilities immediately on leaving high school. Those who complete two years of post-secondary education average at the 60th-percentile basic skills, while those who complete four years of college average 78th-percentile skills. Thus, employers are correct in using educational attainment and diplomas as proxies for skills.

CHART 2.

PERCENTAGE INCREMENT IN INCOME WITH COLLEGE DIPLOMA

COLLEGE VS. HIGH SCHOOL GRADUATES SAME AGE





But if skills and schooling are correlated, they are hardly synonymous. As the debate over school reform has demonstrated in the 1980s, there is no guarantee that those who have diplomas have commensurate competencies. Though half of high school dropouts rank in the bottom fifth of the basic skills distribution, half of persons in this bottom quintile have a diploma.

The difference between educational attainment and achievement is particularly apparent for minorities and the economically disadvantaged. Laudable progress has been made in equalizing attainment, but less progress has been made in equalizing achievement. For the 1980s cohort of young Americans, the chances of graduating from high school were 83 percent for whites and 72 percent for blacks, a high school attainment gap of 11 percentage points. The chances of graduating with the basic skills which the Armed Forces consider necessary for trainability was 63 percent for whites vs. 14 percent for blacks, a high school achievement gap of 49 percentage points. (Chart 3) Likewise, the college achievement gap was double the college attainment gap.

Basic skills matter in the labor market independent of educational attainment and credentials. Among out-of-school 19- to 23-year-olds, males with a high school diploma and skills in the top fifth of the overall skills distribution have annual earnings 80 percent above male graduates with lowest quintile skills. (Chart 4) Male dropouts with top-quintile skills have earnings nearly double those of dropouts with lowest quintile skills, but also half again those of graduates with lowest quintile skills.

CHART 3. EDUCATIONAL ATTAINMENT VS. EDUCATIONAL ACHIEVEMENT FOR MINORITIES, 1980

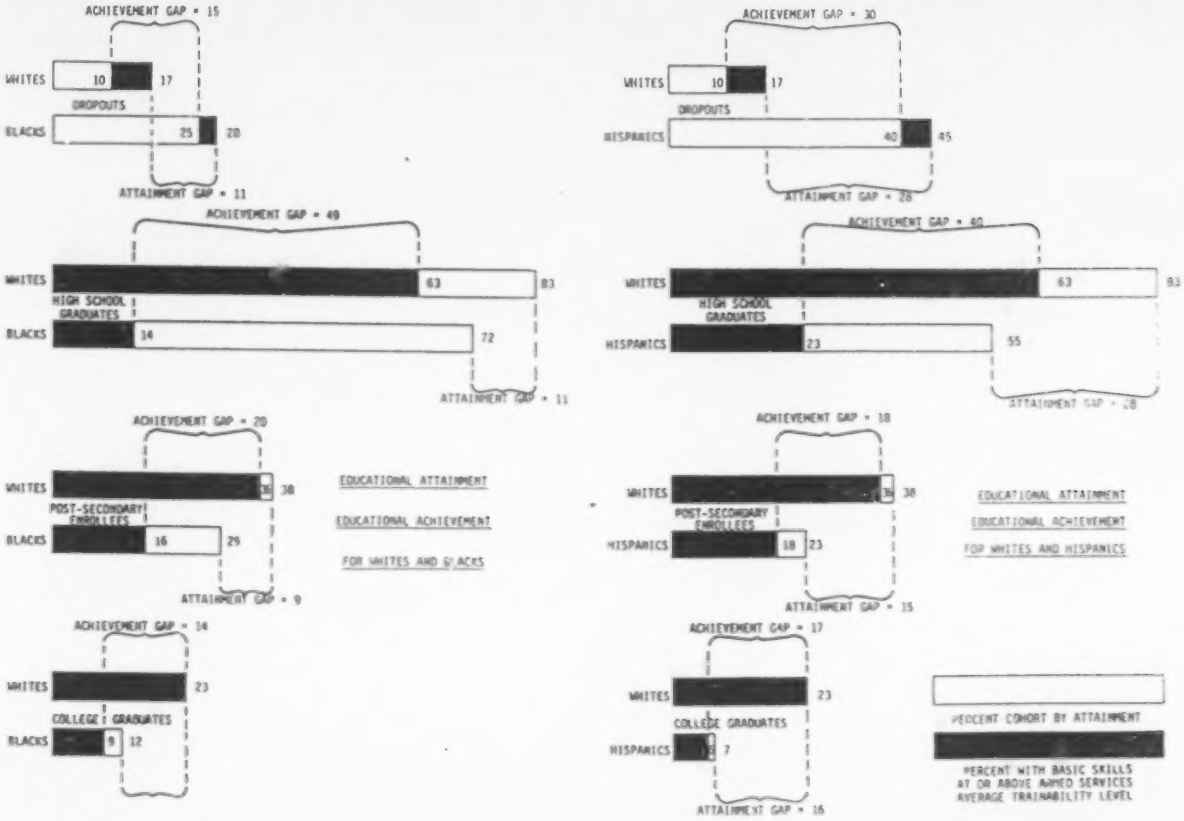
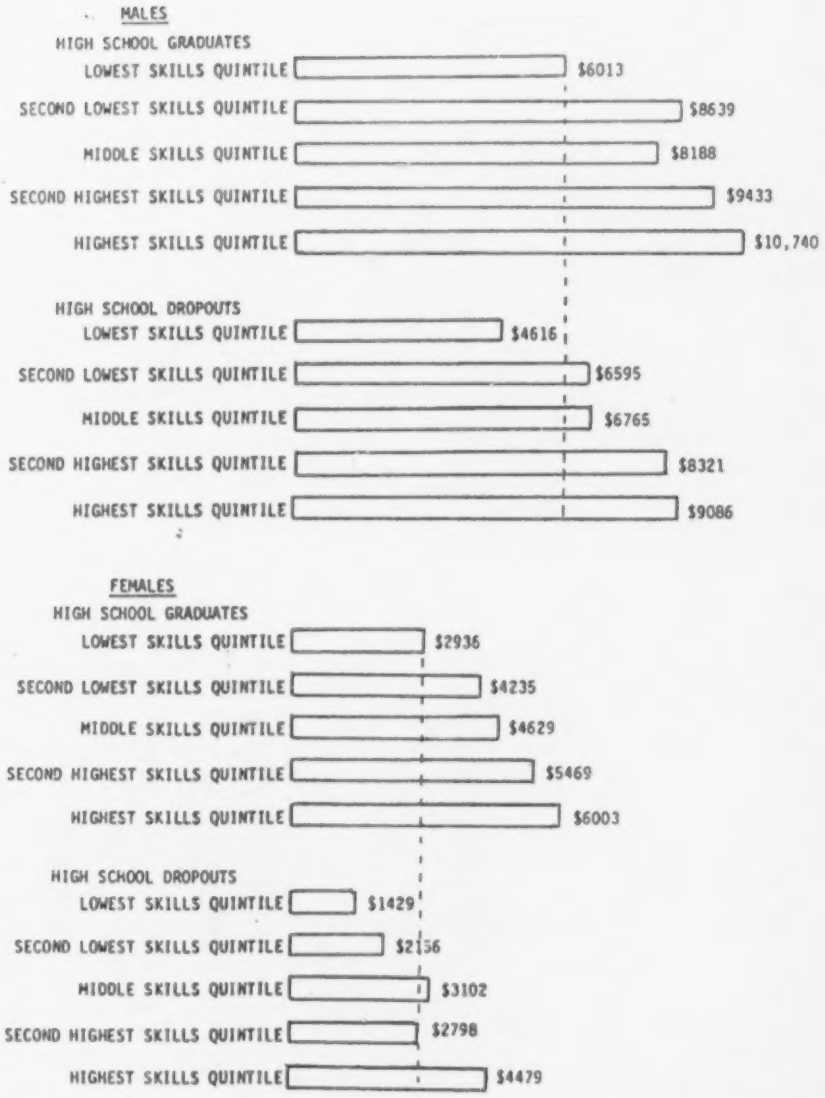


CHART 4.

AVERAGE ANNUAL EARNINGS, 1979-1981

OUT-OF-SCHOOL YOUTH AGE 19-23 IN 1981



Controlling for family background, demographic characteristics as well as area of residence, each extra grade of secondary schooling added $715 to the $5105 mean annual earnings of the 1980s cohort of 19- to 23-year-olds. The diploma added $927 in addition to the $715 increment for the 12th year of attainment. Independent of attainment and credentials, each grade-equivalent increment in basic skills yielded a $185 earnings payoff:

Regression-Estimated Annual Earnings Payoff

	Dollars	Percent
One Grade More Attainment	$715	14.0%
High School Diploma Net Of Attainment	927	18.2
Grade-Equivalent Of Basic Skills Net Of Attainment And Credentials	185	3.6

Once past school-leaving age, there is not much which can be done to increase the years of school completed or to get a "real" high school diploma. Half of young adult dropouts in 1985 had participated in a GED program at some point, and two-fifths of these completed successfully. But the GED is a basic skills certification rather than a diploma. It serves a screening purpose, in that the average skills of those attaining the certificate are just a little below the average for all high school graduates without higher education, while the skills of those failing the GED are similar to those of other dropouts. The earnings payoff of the GED certificate for the 1980s young adults was one-third that of the high school diploma excluding basic skills from the explanative equations, but adjusting for the better skills of GED-holders vs. other dropouts, the certificate had little or no independent impact. In other words, for

those beyond normal school-leaving age, basic skills, rather than years of schooling or credentials, are the instrumental variable in the employment equation.

Social Consequences of Skills Deficiencies

It is not just those with inadequate skills who bear the consequences. Basic skills deficiencies are a common denominator of our most serious social problems--poverty, racial discrimination, early school leaving, unemployment, crime and illegitimacy. Among the last cohort of school leavers and our rising generation of breadwinners, family heads and citizens--the 20 million, 19- to 23-year-olds at the beginning of this decade--nearly half of the poor, half of minorities, and two-fifths of those suffering from one or more social pathologies, were concentrated in the bottom fifth of the basic skills distribution as measured by the Armed Forces Vocational Aptitudes Test Battery reading and math subtests:

	Percent In Lowest Fifth Of Basic Skills	Percent With Below Average Basic Skills
Poor	46%	77%
Minority	52	84
One Or More Social Pathologies	41	75
Idle: No School, Work Or Children	40	72
Dropout	52	85
Welfare Recipient	53	79
Unwed Parent	59	85
Arrested In Previous Year	37	68

Race, poverty and pathology compound on the basic skills denominator. The poor ranked in the 23rd percentile of the basic skills distribution for 19- to 23-year-olds. Those who were minority and poor had 11th-percentile skills. The

minority, poor and dependent fell in the 7th percentile of the basic skills distribution:

	Mean Percentile Ranking In Basic Skills Distribution
No Pathology	58
All 19- To 23-Year-Olds	50
Poor-No Pathology	45
Arrested	32
One Pathology	32
Idle (No School, Work Or Children)	26
Dependent	24
Poor	23
Two Pathologies	22
Minority-No Pathology	21
Poor-One Pathology	21
Unwed Parent	21
Minority	20
Dropout	20
Poor-Idle	18
Poor-Dependent	16
Three Or More Pathologies	15
Minority-Two Pathologies	14
Minority-Idle	13
Minority-Unwed Parent	13
Minority-Dependent	13
Minority-Poor	11
Minority-One Pathology	11
Minority-Dropout	9
Poor-Three Or More Pathologies	9
Minority-Two Pathologies	8
Minority-Poor-Idle	8
Minority-Poor-Dependent	7
Minority-Three Or More Pathologies	5

Regression analysis suggests that these relationships are more than coincidental:

First, basic skills deficiencies are a statistically significant predictor of dependency. Controlling for family background, demographic characteristics and area of residence for young adults in 1980, each year of added schooling reduced by a third the probability that a 19- to 23-year-old would receive food stamps and/or cash assistance, with the diploma subtracting another tenth.

Adjusting for attainment and credentials, a grade more of basic skills also reduced the chances of dependency by 5%:

Probability Of Dependency	.0855	
Regression-Estimated Impacts:		
One Grade More Attainment	-.0300	-35.1%
Diploma Net Of Attainment	-.0070	- 8.2%
One Grade Basic Skills Net Of Attainment And Diploma	-.0046	- 5.3%

Second, teen pregnancy and resulting early school leaving are a cause of basic skills deficiencies, but limited skills are also an important factor in explaining out-of-wedlock births. Among 17- to 21-year-old women who were unmarried in 1979, 7.7% of whom gave birth to a child out of wedlock over the next two years, a diploma reduced the chances by half, and a grade more of basic skills reduced the out-of-wedlock birth rate by another 7%:

Probability Of Out-Of-Wedlock Birth	.0770	
Regression-Estimated Impacts:		
One Grade More Attainment	-.0000	
Diploma Net Of Attainment	-.0420	-53.8%
One Grade Basic Skills Net Of Attainment And Diploma	-.0050	- 6.5%

Third, there is also a statistically significant relationship between crime and basic skills. Among noninstitutionalized males age 19 and over in 1981, 7.7% reported being arrested in the prior year. Controlling for age, race, family background and area of residence, a diploma plus a grade more basic skills reduced the chances of arrest to almost zero:

Probability Of Arrest	.0770	
Regression-Estimated Impacts:		
One Grade More Attainment	-.0000	
Diploma Net Of Attainment	-.0720	-93.5%
One Grade Basic Skills Net Of Attainment And Diploma	-.0048	- 6.2%

In summary, if a magic wand were waved over the cohort of young Americans age 19 to 23, raising their basic skill by a grade equivalent, the following would be predicted:

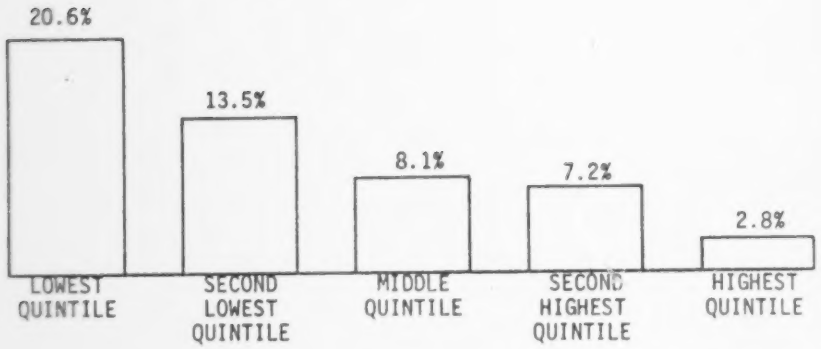
- Lifetime earnings would increase by 3 to 4 percent.
- The number of births out of wedlock annually would decline by 6 to 7 percent.
- Welfare payments would be reduced by 5 percent.
- Arrests would be cut by 5 percent during the high risk years from age 19 through 29.

An Ounce Of Prevention

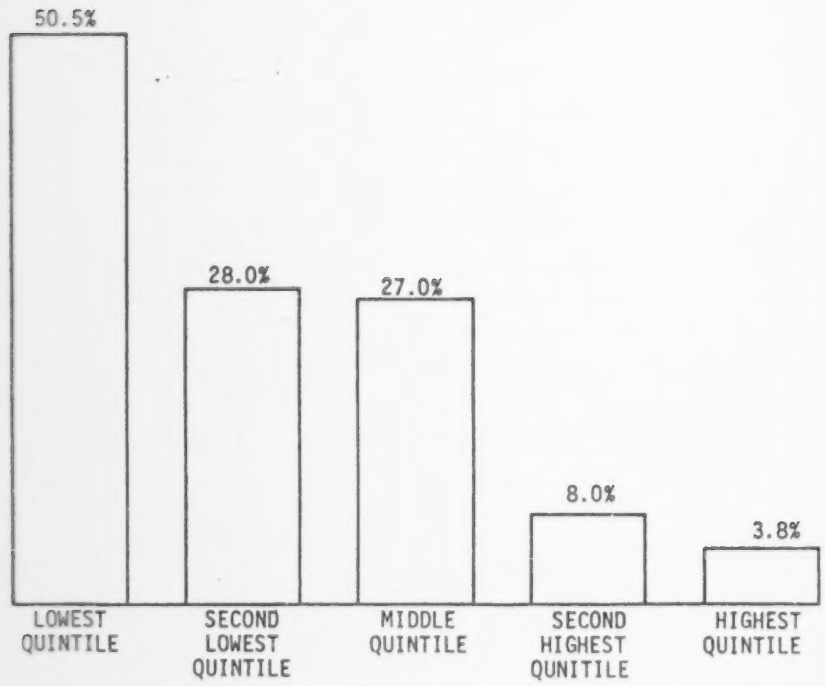
Waving the magic wand earlier could help prevent some of these problems and pathologies, working indirectly through increased schooling and credentials. Basic skills deficiencies are not only a result, but also a cause, of limited educational attainment. Those who will drop out of high school before graduation can be predicted at an early age with astonishing accuracy based only on tested basic skills. Among high school students age 14 and 15 in 1979, a fifth of those in the lowest quintile of the basic skills distribution had dropped out by 1981, seven times the dropout rate among students with top-quintile skills. (Chart 5) Among 16- and 17-year-old students in 1979 who had ten years of schooling, over half from the lowest-skills

CHART 5.

DROPOUT RATE BY 1981, STUDENTS AGE 14-15 IN 1979



PERCENT NOT GRADUATING BY 1981, STUDENTS AGE 16-17 IN 1979
WITH 10 YEARS SCHOOLING



quintile had failed to graduate by 1981 compared to less than 4% from the high-skills quintile.

Those with limited skills tend to be held back. A third of all high school students in 1979 were behind modal grade by one year, with an additional 5 percent lagging at least two years. On average, students at modal grade were in the 53rd percentile of the basic skills distribution for students; those behind one grade averaged skills at the 36th percentile; and those behind two or more grades averaged at only 17th-percentile skills.

Laggers are likely early school leavers. This may be because they are older than peers and feel out of place, because they lack the skills to keep up, or both. Regression analysis suggests that for youth below the normal school-leaving age, skills deficits are the predominant factor. Among students age 14 and 15 in 1979, 13.3 percent dropped out by 1981. Controlling for age, race, sex, number of parents at home, mother's education and area of residence, each year behind modal grade increased the dropout rate an insignificant .3 percentage points, while each grade-equivalent deficit in basic skills increased the dropout rate by 1.7 percentage points. Among students age 16 and 17 in 1979, 11.5 percent dropped out by 1980. Each year behind modal grade increased the likelihood of dropping out a significant 2.5 percentage points, but a grade-equivalent skills deficit increased the chances an independent 1.3 percentage points.

Among persons age 20 through 23 in 1981 and no longer in high school, 22.5 percent were dropouts. Controlling for race, age, sex, number of parents at home at age 14, mother's education and area of residence, each grade equivalent of added skills increased the probability of having completed high school by 3.7 percentage points.

The chances of being enrolled in post-secondary education in 1980 were 46% for 1979 high school seniors. Among those in the lowest quintile of the skills distribution, the post-secondary enrollment chances were only one in seven, as compared to three in four for those in the highest quintile. Among 1980 post-secondary enrollees, 21% had dropped out by 1981, including over two-fifths of students from the lowest quintile of skills, but less than a tenth of those from the highest quintile:

Ranking In Basic Skills Distribution Of Seniors	Percent Enrolled In College 1980	Percent 1980 College Students Not Enrolled 1981
Lowest Quintile	14.3%	43.3%
Second Lowest Quintile	29.5	36.2
Middle Quintile	33.8	28.9
Second Highest Quintile	47.1	21.5
Highest Quintile	77.7	8.5

Controlling for race, age, sex, family background and area of residence, each grade equivalent increment in basic skills increased the probability that a 1980 graduate would be enrolled in 1981 by 4.0 percentage points relative to a mean of 49%. Other studies have found that each grade-equivalent increase in college entrance test scores raises the probability of completion by 3.0 percentage points relative to the mean of 72% for the two-thirds of post-secondary students enrolling in four-year colleges.

Thus, if the magic wand endowed a group of 1000 14-year-olds with one more grade of basic skills, an additional 37 would graduate from high school, reducing the number of dropouts by a sixth. Mean years of educational attainment for the group would rise by estimated .12 years because of longer stay of high school students. An additional 50 would enroll

in college and 33 more would graduate from four-year colleges.

Better basic skills at an early age would also reduce the chances of teen pregnancy. For all 14- to 18-year-old female students, the chances of having a child out of wedlock were approximately 8% over the school years. The regression-estimated impact of one grade more basic skills was to reduce this chance by .4 percentage points, a 5 percent reduction.

From Generation To Generation

Parents with more education tend to produce children who grow up having better basic skills. Children from two-parent families tend to have better skills than those from single-parent families. Individuals with lower basic skills have more children and more of their children are born out of wedlock. So basic skills deficiencies are transmitted from generation to generation.

In regression equations predicting the basic skills of the 1980s young Americans, controlling for race, age, region, parents' educational attainment, and number of parents in the home at age 14, a one-grade improvement in the basic skills of mothers was associated with more than half a grade better skills for the offspring. A grade more attainment for fathers was associated with a little less than half a grade increment. Absence of one parent in the home at age 14 was associated with a half grade decrement in the basic skills of the children.

The family formation and childbearing patterns of the current generation are doubly disturbing in light of these intergenerational relationships. Mothers with the most skills to impart to their children have the fewest children. Among 19- to 23-year-olds in 1981, over half of the women in

the bottom fifth of the basic skills distribution had at least one child, compared to just one in eight women in the top fifth of the basic skills distribution. Moreover, one in five of the women with the most limited skills had already given birth to two or more children, compared to less than one in twenty women with advanced skills. Put another way, women with no children were in the 50th percentile of the skills ranking, while those with four children were in the 14th:

Mean Percentile Ranking In Basic Skills Distribution

	All	Black	Hispanic
No Children	50	25	28
One Child	30	16	16
Two Children	28	13	14
Three Children	16	8	9
Four Children	14	11	12
Five Children	11	7	--

The result is that many of the children born to younger mothers are raised in ignorance. Women in the bottom fifth of the skills distribution accounted for two-fifths of all births among women age 19 through 23. Women in the top fifth of the basic skills distribution accounted for less than a twentieth of all births. Controlling for age, race, residence, region, mother's education and number of parents in the home at age 14, each grade-equivalent increment in basic skills reduced the average number of children by .041, relative to a mean for all women age 19 to 23 of .475.

Half of the children born to mothers in the lowest fifth of the basic skills distribution were further handicapped by the absence of a father in the home. In contrast, only one in seven children with mothers having top-quintile highest skills did not have a father present.

To make matters worse, unwed mothers with better basic skills have better marriage prospects. A fourth of unmarried young women with children in 1979 who had above average basic skills were married by 1981, compared to just one in twenty of those in the bottom quintile of skills. For black dropouts with children, marriage prospects were nil.

Although these varied estimates of intergenerational effects are necessarily speculative, their impacts are additive and the relationships are so powerful that it is reasonable--and conservative--to project that an improvement of one grade equivalent in the basic skills of youth today will have at least an equal impact on youth a generation hence.

THE COSTS OF THE CRISIS, THE BENEFITS OF ITS CURE

Given the powerful relationship between basic skills and earnings, out-of-wedlock births, school success, dependency and crime, it is apparent that the individual, social and taxpayer costs of the basic skills crisis are extremely high, as are the potential payoffs if this national cancer can be cured.

Direct Costs Of Inadequate Skills

If a "magic wand" were waved over all 19 year-olds, giving them a sustained grade improvement in basic skills but no change in educational attainment, the following direct payoffs could be reasonably projected:

1. Increased Earnings Associated With Increased Basic Skills. Lifetime earnings would increase at least 3.5 percent. Based on the latest lifetime earnings projections from the Census Bureau, adjusting to 1986 prices, assuming zero productivity growth, weighting according to the educational attainment patterns of the

1980's cohort of young adults, and discounting at a 5 percent rate to current value, the current value of lifetime earnings for 1980s young Americans will be a little under a quarter million dollars. If a grade better basic skills resulted in a 3.5 percent increase in lifetime earnings, then its present value would be $8600. Research findings suggest that the basic skills payoff increases over the long-run in the labor market, and that employers do not pass on all the basic skills-related productivity differential in higher wages, so this calculated earnings payoff of a grade more skills is as likely to be an underestimate as an overestimate.

2. Reduced Dependency Associated With Increased Basic Skills. The chances of welfare dependency are reduced 5 percent by a grade of skills net of any change in attainment. A back-of-the-envelope estimate of the annual income maintenance costs for each dependent mother and child includes $2700 in AFDC payments, $1000 for food stamps, plus $1300 for Medicare for a mother and child, or roughly $5000 annually. Projected for the 18 years of a child's upbringing, and discounted at 5 percent, the current value is $60,000. If basic skills instruction were targeted on the welfare population, the savings would be 5.3 of this amount per individual, or $3250 each. But if an entire cohort of 19-year-olds is upgraded, which has only a one-in-eleven chance of dependency, the savings would average $280 per grade of basic skills achieved.

3. Reduced Births Out Of Wedlock Associated With Increased Basic Skills. Each child born out of wedlock and into almost assured poverty represents a significant burden for society beyond income support. Delivery plus pre- and post-natal care cost nearly $3000. Maternal and child health, Headstart and Women

and Infants Care add $500 annually for each poor, pre-school child. The child nutrition, Chapter I, and child welfare programs cost $1250 annually per child in poverty through age 13. The current value per child in poverty is $11,500. If basic skills instruction were targeted on the low-skills group prone to having children, the 6.5 percent reduction in childbearing out of wedlock in any two-year period associated with a grade of basic skills would represent a very significant savings. But for the entire cohort, with lesser chances of out-of-wedlock births, the average value is around $250 in current terms projecting the two-year effects over the ten years of highest fertility.

4. Reduced Arrests Associated With Increased Basic Skills. The chances of arrest would be reduced by 6.2 percent among males age 19-23 if they had a grade more skills. A best estimate given the pattern of arrests reported by young adults is that each self-reported arrest carries a mean social cost of $7500 including all police, court, correction, and victim costs. Assuming the measured impacts will continue for ten years until the cohort ages out of the at-risk period, adding 70 percent to self-reported arrests to adjust for underreporting, and assuming no impact on females, the total effect of a grade of skills would be to reduce average arrests by .004 per year, which would have a current value of $250 at a 5 percent discount rate.

Indirect Costs Of Limited Schooling Due To Limited Skills

If the magic wand were waved earlier in order to give 14 year-olds a sustained grade increment in basic skills, there would be several additional indirect payoffs:

1. Increased Earnings Associated With Increased Educational Attainment And Diplomas. The major consequence would be increased educational attainment and more graduates with high school and college diplomas, hence greater lifetime earnings. Discounted to present value at age 19 using a 5 percent discount rate, and conservatively assuming no productivity growth, projected lifetime incomes by educational attainment are as follows:

Dropouts	$160,000
High School Graduates	250,000
College (1-3)	270,000
College (4+)	315,000

The regression-estimated effects from a grade improvement of basic skills for an entire cohort would be to shift the attainment distribution as follows:

Regression-Estimated Changes In Educational Attainment Distribution

	Before	After
Dropout	22.5	18.8
Graduate, No Further Education	39.5	38.2
College (1-3)	19.8	21.5
Graduate	18.2	21.5

The weighted average discounted lifetime incomes would, thus, be increased from 245,600 to 251,000 or by $5400. Discounted to age 14, this would have a value of $4400.

2. Reduced Births Out Of Wedlock To Teen Parents Associated With Increased Basic Skills. A reduced number of children would be born to young teenagers. For a cohort with skills increased by one grade level at age 14, the predicted .4 percentage point lower

probability of having a child out of wedlock by age 19 would reduce the per person spending for childbirth, nutrition and child-care by another $50 per individual.

3. Reduced Dependency Associated With Increased Educational Attainment And Diplomas. With .12 more grades of average attainment and a 3.7 percentage point increase in the proportion with a high school diploma, the probability of dependency at age 19 and over would be reduced, with an estimated, value discounted to age 14, of $200.

4. Reduced Arrests Associated With Increased Educational Attainment And Diploma. The increase in high school completions would translate into a .003 reduction in the annual arrest rate from age 19 on, which would have an estimated value, discounted to age 14, of $150.

5. Reduced Births Out Of Wedlock To Young Adults Associated With Increased Educational Attainment And Diplomas. The increased high school completions would also be expected to reduce out-of-wedlock births to young adults; the value, discounted to age 14, net of public assistance savings, would be $75.

If money were spent for basic skills instruction at age 14 instead of age 19, the direct benefits calculated for 19-year-olds would have to be discounted back to age 14. But waving the magic wand earlier makes sense, since the total of these discounted direct benefits plus the indirect benefits from earlier intervention equals $12,600, while the sum of the direct benefits alone is $9400. In other words, there is a two-fifths increase in the present value of benefits as a result of intervening earlier.

Intergenerational Costs Of Parental Skills Deficiencies

Finally, if each grade more skills of parents in one generation yields an equal increment in the skills of the next generation--which seems to be a reasonable assumption based on the evidence--any direct and indirect impacts on the current generation would be repeated 25 years hence, so the current value of the intergenerational effects would equal direct and indirect benefits, estimated to be $12,575, multiplied by the 25-year discount factor, or .3 at a 5 percent discount rate. In other words, the intergenerational benefits would have a current value of $3800, or a third of the other direct and indirect benefits.

The Bottom Line

The total of these direct, indirect and intergenerational impacts is an average benefit of $16,400 for one sustained grade level improvement in basic skills. (Table 1) Like all benefit-cost projections, this "best estimate" is highly speculative. The regression equations which are the basis of the parameters assume "all else equal," and raising a whole generation's basic skills hardly meets this criterion. Even though all equations include a wealth of background variables and are conservatively specified, basic skills may be a proxie for other measures and relationships. Statistically significant correlations do not always imply causality. Yet the estimates do help assess relative magnitudes of impacts in terms most easily understood--dollars and cents costs for grade-equivalent skills gains--providing a framework for determining the significance of different assumptions. And what the numbers tell us is that if a sustained grade gain in basic skills can be achieved for less than $15,000, it is a good social investment.

TABLE 1. AVERAGE ESTIMATED BENEFITS OF A ONE GRADE SUSTAINED IMPROVEMENT IN BASIC SKILLS ACHIEVED AT AGE 14

Direct:	
1. Increased Earnings Associated With Increased Basic Skills	$7,100
2. Reduced Dependency Associated With Increased Basic Skills	230
3. Reduced Births Out Of Wedlock To Young Adults Associated With Increased Basic Skills	205
4. Reduced Arrests Associated With Increased Basic Skills	205
Total Direct Benefits	$7,740
Indirect:	
1. Increased Earnings Associated With Increased Educational Attainment And Diplomas	$4,400
2. Reduced Births Out Of Wedlock To Teen Parents Associated With Increased Basic Skills	50
3. Reduced Dependency Associated With Increased Educational Attainment And Diplomas	200
4. Reduced Arrests Associated With Increased Educational Attainment And Diplomas	150
5. Reduced Births Out Of Wedlock To Young Adults Associated With Increased Educational Attainment And Diplomas	75
Total Indirect Benefits	$4,875
Intergenerational:	
1. Direct Plus Indirect Discounted 25 Years To Present Value	$3,800
Total Benefits	**$16,415**

If a sustained grade gain in basic skills can be achieved for less than $5,000, it is a profitable investment for taxpayers who benefit from lower social pathology costs and the increased taxes of those with better skills and more earnings.

WHAT CAN BE DONE?

It would be depressing, indeed, if basic skills deficits were intractable, or if cures were more costly or painful than the problem itself. Yet all evidence suggests that basic skills can be improved substantially, and for far less than the investment thresholds. In fact, basic skills are one of the few social variables which is demonstrably and cost-effectively reactive to the policy interventions.

Basic Skills Can Be Improved

There is copious evidence that basic skills can be mastered by almost anyone, even those who have failed in or been failed by the schools:

In World War II, and again in the Vietnam conflict, the Armed Forces had to turn to the "third of a nation" spurned in peacetime because of skills deficiencies. These "low standards" recruits were placed into special units in World War II and into Project 100,000 in the 1960's, where they were provided short-term instruction designed to get their skills up to the point they could function with reasonable effectiveness. The record shows that concentrated but short periods of basic skills instruction improved skills significantly, and that subsequent performance on the job was adequate.

The Job Corps, our nation's longest-standing program for dropout and disadvantaged youth, has provided remedial

education in combination with vocational training and other services to 1.5 million young adults since its inception in 1964. Study after study has documented Corpsmembers' learning gains and their centrality to the positive outcomes of the program.

Headstart and Follow-Through were intended to prevent what the Job Corps sought to remedy, by providing elementary instruction to disadvantaged pre- and primary-schoolers to help them overcome any handicaps at the educational starting gate. Prevention worked, according to careful follow-up studies of early cohorts of learners who have now grown up and entered the labor market with increased educational attainment, credentials and skills and consequently greater labor market success.

Also initiated in the mid-1960s, federally-funded compensatory education has had cumulative impacts. Targeted chiefly at the primary school level, it must be given some of the credit for the absolute and relative improvement in reading and math skills realized by younger minority and low income students, as documented by the National Assessments of Education Progress over the last decade. The most recent Assessments have added encouraging evidence that these gains persist, with minority and disadvantaged 17-year-olds showing relative gains in reading.

Adult basic education is another Great Society legacy which provides federal support for a potpourri of state and local literacy, English-As-A-Second-Language and GED preparation programs. President Reagan's National Adult Literacy Task Force recently highlighted hundreds of programs throughout the nation which could document the substantial basic skills gains of their adult and young adult participants.

Finally, in all the fuss over the inadequacies of our schools, it is sometimes forgotten that schools <u>do</u> teach

basic skills, and that students regularly progress from year to year. Indeed, recent evidence suggests that the below-average gains of minority and poor students result from slippage during the summer rather than slower learning during the school year. And the STEP demonstration, funded by the Ford Foundation to combine education and work during the summer months, has demonstrated that this erosion can be halted so that minority and poor students can keep up with their peers.

Prescriptions For Teaching Basic Skills

These overall program results are the average of a mix of highly effective as well as deplorably ineffective instructional activities. The impacts of pre-school, school-based and remedial education could be improved substantially if the ingredients of more successful projects could be identified and replicated. Reassuringly, there is consensus among experts about the key factors for effective basic skills instruction. Effective schools studies have discovered common features among those secondary schools achieving learning gains with students and in settings where most other schools fail. The President's review of adult basic education programs throughout the nation isolated the success ingredients of exemplary programs. Marked similarities have been found among post-secondary remedial courses achieving above-average results. Finally, job training program evaluations have isolated the key factors in effective basic skills components.

There is surprising consistency between the treatment approaches which work in these varied institutional settings serving quite different learner populations. Without much loss or distortion, the findings can be condensed into the following ten prescriptions for effectively teaching basic skills:

1. Learning basic skills is a step-by-step process best achieved through individualized, self-paced instruction.

2. Learning is accelerated when it is competency-based rather than time-based, and is more feasible when it can be flexibly scheduled and sequenced.

3. Learning is facilitated when a variety of instructional materials and media are available and used, including computer-based approaches.

4. Learning is given impetus and direction by frequent feedback on progress and greater accountability for learning efforts and outcomes.

5. Learning is enhanced when learners have a sense of "efficacy," taking responsibility and directing their own learning towards agreed-upon goals.

6. Learning depends on the applied learning time or "time-on-task" during instructional hours.

7. Learning is accelerated when caring teachers provide individual attention and assistance.

8. Learning is easier for those who believe they can learn, and is enhanced by instructors, instructional approaches and instructional settings which provide positive reinforcement.

9. Learning is nurtured in a structured yet supportive environment which deals with personal problems so they do not intrude on learning.

10. Learning is accelerated and more directed when integrated with other activities, pursued as a means to other ends, and taught with materials relevant to these other activities.

A TOOL TO ADDRESS THE BASIC SKILLS CRISIS

The issue is not "what to do" but "how to do it." The prescrptions of education research are all too rarely applied in practice. To fill this gap, the Ford Foundation funded the Remediation and Training Institute to integrate effective educational approaches and materials into a system which could be used in schools, community institutions and workplaces to improve the quality, expand the quantity and increase the accessibility of basic skills instruction. The result was the Comprehensive Competencies Program (CCP), a complete, individualized, competency-based instruction program using state-of-the-art technologies, packaged to deliver effective education with businesslike efficiency.

The CCP was developed in 1983, first tested in 1984, then tried out in community organizations, secondary and post-secondary schools, job training programs, worksites and corrections facilities in 1985. Growth has been exponential and there are now over 200 CCP Learning Centers in 35 states serving 15,000 learners including pre-school, primary, vocational, secondary, post-secondary and dropout youth, young adults in the labor market full-time, teen parents, youthful offenders and special needs students (in addition to an equally diverse array of adult learners). The CCP and CCP Learning Centers have proven their potential to help alleviate the basic skills crisis.

Applying The Prescriptions For Basic Skills Instruction

CCP Learning Centers are the "high-tech equivalents of traditional one-room schoolhouses." While varying in size, inventory and institutional setting, they are all equipped with a variety of print, audiovisual and computer-based instructional materials usually including two or more types of computers and software with one terminal for every three

learners. The courseware spans an array of subjects and ability levels ranging from elementary reading and mathematics, through high school and intermediate college-level science, mathematics, humanities, social studies and writing. They also cover functional subjects determined critical for success in the home, community and workplace, such as job getting and holding, consumer skills, citizenship, health and use of community resources. The CCP provides a comprehensive array of tests for determining where a learner should start, how fast he or she is progressing, and when they need help. Pre-structured lesson assignments provide menus for each prescribed learning objective, guiding the instructor and the learner to appropriate materials. User-friendly CCP software automates test scoring as well as recordkeeping, reporting and analysis using inexpensive microcomputers.

The assignments, tests and computer systems are so simple that learners can maintain their own records, find their assignments, take and then score their own tests, with only occasional help. Freed from lesson planning, and with automation of time-consuming activities such as test preparation and checking, teachers can concentrate on one-on-one instruction to help learners whenever they encounter problems in their individual work. A single teacher can work with a diverse group of learners, all pursuing different subjects at different levels as dictated by their individual needs, and yet still provide "high touch" to complement the "high-tech."

A well-organized and managed CCP Learning Center delivers all the research-based prescriptions for effective basic skills instruction:

**Individualized, Competency-Based Instruction. Each learner can work on just what he or she needs at whatever pace is most comfortable.

**Open-Entry/Open Exit Flexibility. Instruction can be flexibly scheduled for any duration, intensity or frequency in order to accommodate individual situations, with completion as rapidly as mastery is achieved.

**Instructional Options. There are different materials and media easily accessible to address a comprehensive array of instructional objectives so each learner's needs and learning style can be accommodated.

**Self-Directed Learning. The learners are given responsibility, choice and a substantial degree of control, enhancing their feeling of efficacy and their commitment.

**Positive Reinforcement. The organization of instruction into easily-mastered steps, and the frequent mastery tests documenting progress, provide recognition and reinforcement for learning achievements.

**Accountability. With automated scoring and tracking, there is immediate feedback on the status of each learner so problems can be identified and addressed, with accountability for learning efforts and outcomes.

**Maximum Time-On-Task. The applied learning time or "time-on-task" is maximized since each learner works individually on appropriate materials, with little time lost to group disruptions or explanations.

**One-On-One Attention. Teachers and aides have the time and tools to provide one-on-one attention and assistance when needed.

**Supportive Environment. With individualized instruction, attention and accountability, an individual's problems can

be addressed without disrupting other learners, so a structured yet supportive learning environment can be maintained.

**Work And Training Linkages. With flexible scheduling possible because of the open-entry/open-exit design and with the competency-based approach which permits the teaching of whatever skills are relevant, learning can be more easily integrated with work, training and education activities.

CCP Impacts And Effectiveness

While these ingredients are equally important and effective for all types of learners, whether fast or slow, advantaged or disadvantaged, college-bound or learning impaired, the first priority of CCP Learning Centers is to help those most in need:

- Three-fourths of CCP learners come from poor families, three-fifths dependent on some form of welfare.
- Two-thirds have been without a paycheck for a year or more; and half totally outside the mainstream, with no work, school or training in the three months prior to entry.
- One of three entrants is a migrant, a displaced homemaker, an offender or suffers from limited English proficiency or a handicap, while a fourth are single parents.
- Half of learners are previous high school dropouts, and most enter with seriously deficient, sixth-grade equivalent reading and math skills.

CCP instruction is most often combined with or leads to other training, education and work activities, so it is

74-573 0 - 87 - 6

usually limited in duration. The 10,000 terminees to date have averaged 50 hours of CCP instruction. But in this short time, the typical learner gained 1.1 grades in reading skills and 1.6 grades in math skills:

	Grade Gains Reading	Math
All Terminees	1.1	1.6
Distribution Grade Gains		
0 Or Negative	22%	17%
> 0 < .5	12	10
.5 < 1.0	15	15
1.0 < 1.5	16	15
1.5 < 2.0	13	11
2.0 +	23	32

Substantial gains have been realized by even the most disadvantaged learners. Solo parents, welfare recipients, entrants reading below the seventh grade level, dropouts and minorities all have achieved reading gains at least 90 percent of the average for all participants, and the math gains for these particularly disadvantaged groups have been substantial:

	Reading Grade Gain	Math Grade Gain
All	1.2	1.4
Single Parents	1.2	1.5
Welfare Recipients	1.3	1.5
Low Readers	1.4	1.2
Dropouts	1.2	1.3
Under Age 22	1.3	1.2
Blacks	1.1	1.1
Hispanics	1.7	1.3

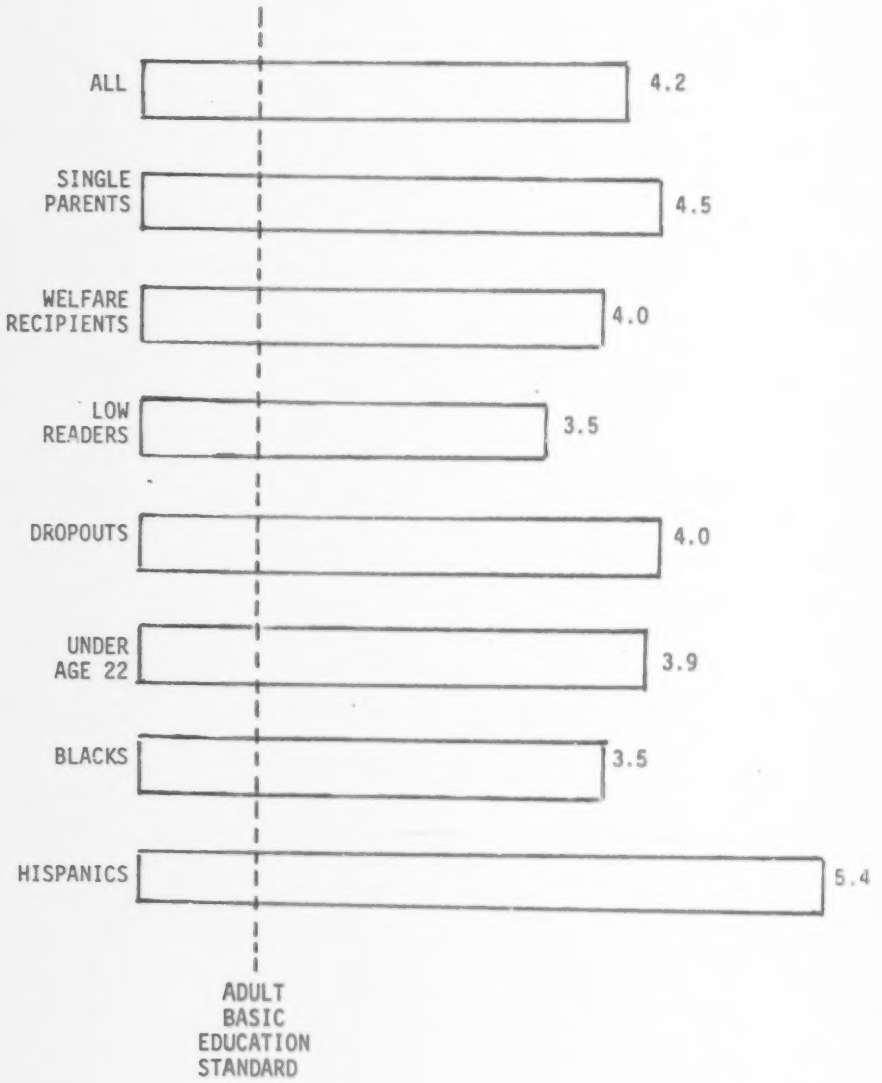
The learning gain rates of all these groups have far exceeded the adult basic education goal of one grade gain in a subject per 100 hours of related instruction. (Chart 6)

CHART 6.

AVERAGE OF READING AND MATHEMATICS GAINS

PER 100 CCP INSTRUCTIONAL HOURS

IN GRADE EQUIVALENTS



Equally significant, almost all the varied organizations using CCP have achieved laudable gains and gain rates despite the diversity of their target groups, institutional settings, use activities and learning center characteristics. Three of four CCP Learning Centers have averaged more than one grade level improvement in reading and seven of ten have averaged a grade or more improvement in math.

Combining Business Efficiency With Educational Effectiveness

Good education is only one of the aims of CCP. Efficiency is stressed as much as effectiveness, so that the best basic skills instruction can be delivered at an affordable price. Because CCP Learning Centers can teach a diversity of learners simultaneously, class-size ability and subject groupings are unnecessary, in contrast to traditional education where there must be a grouping of learners of similar ability for each subject, class and teacher. Open-entry/open-exit, flexible scheduling makes it easier to maintain full utilization of equipment, materials and staff. The CCP dramatically increases the productivity of instructional staff by simplifying tasks, by minimizing the need for lesson planning, test preparation and materials screening, by automating test-scoring, reporting and analysis, and by facilitating use of aides for many functions usually handled by teachers. In other words, almost all hours are spent in the center teaching rather than outside the classroom shuffling papers.

As a result, a CCP Learning Center can deliver quality instruction for less than $5 per instructional hour when fully utilized and optimally operated, or for around $10 per instructional hour under the typically far from optimal conditions in nonprofit programs serving the hardest core. These hourly costs, which include all operating expenses,

whether cash or in-kind, plus amortization of equipment and courseware investments over two years, are a little higher than traditional education alternatives. But the result of combining "high tech" and "high touch" is accelerated learning. The cost per reading grade gain achieved by CCP learners has averaged only $350, and the cost per math grade gain only $250, roughly half the cost per grade gain in traditional education programs.

Thus, CCP combines ingredients which education research has found to be important, into a replicable and adaptable system which can be implemented and operated almost anywhere to meet almost any basic skills instructional need. CCP can be improved, and better systems can be developed, but for now it provides a proven mechanism for addressing our nation's basic skills crisis if we chose to make the requisite investment.

AN AGENDA FOR ACTION

With the social benefits of a sustained grade-equivalent gain in basic skills exceeding $15,000, and the taxpayer benefits exceeding $5,000, any investment in CCP and other basic skills instruction programs of this nature promise to be extraordinarily profitable. With CCP, a grade gain in both reading and math skills can be achieved for less than $600, and even assuming that a third of what is learned decays thereafter, the cost of a sustained grade gain is less than a fifth of the direct payoffs for taxpayers. With this formidible rate of return, the question should not be whether to invest, but how to get underway as rapidly and comprehensively as possible, to address the basic skills crisis on a meaningful scale.

A Basic Skills Mobilization

It is not necessary to "wave a magic wand" to achieve a grade-level gain for all 14 year-olds. A basic skills improvement of this scale is an achievable and affordable policy option:

Three and a half million youth reach age 14 each year. If all were provided 100 hours of extra basic skills instruction, and the most disadvantaged third were provided an 100 additional hours to help them catch up, an average gain of one grade level in reading and one grade level in math could be realized using an approach like the CCP. At the CCP-experienced cost of $10 per instructional hour, the total cost would be $5 billion (or as little as half as much with full utilization of all learning centers). If the disadvantaged learners were totally subsidized, while the parents of the remaining two-thirds paid half the tuition costs, the total public pricetag would be $3.5 billion.

Much of this money could be drawn from existing budgets. For instance, basic skills is supposed to be emphasized under the Summer Youth Employment and Training Program beginning with the 1987 summer. If two-fifths of the $800 million for the program annually were spent for basic skills instruction, this, alone, would offset nearly a tenth of the total cost. Job Training Partnership Act (JTPA) year-round youth programs could be tapped for another $250 million annually. Existing welfare and workfare programs could reallocate similar amounts. The Armed Forces could use such programs for recruiting and preparation, allowing monies to be reallocated from military recruitment and remedial education budgets. As a best estimate, the net public cost of guaranteeing all youth such learning opportunities might be as little as $2 billion annually.

Is such a basic skills mobilization operationally feasible? The several hundred CCP Learning Centers implemented in just the last two years and operating effectively in secondary, post-secondary, alternative and vocational schools, job training programs, community-based organizations, corrections instistutions, union and private sector facilities, testify to the feasibility of replicating individualized, self-paced, competency-based, computer-assisted instruction almost anywhere for almost any learner group. A learning center with capacity for 40 learners, open 50 hours weekly for 50 weeks annually, could deliver 100,000 hours of attended instruction if fully utilized. The 500 million instructional hours needed to endow all 14 year-olds could be delivered by 5000 learning centers.

Learning centers are feasible in almost any of the 25,000 secondary schools, the 3000 post-secondary schools, the several thousand directly-operated JTPA, Job Service and Job Corps centers, in the tens of thousands of recreation centers, juvenile corrections facilities, and local community-based organizations around the country, as well as in union halls and worksites. For instance, if each JTPA Private Industry Council established seven learning centers to meet the needs of summer youth, and then continued their operation year-round, these would provide all the infrastructure necessary to raise the skills of all 14-year-olds a grade level. With turnkey packaging of learning center equipment and materials, plus adequate practitioner-to-practitioner technical assistance, and the full involvement of business, labor, education and nationally-networked community-based organizations, there is no question that 5000 learning centers could be established and fully operational within a year of the go-ahead

decision. Indeed, they could be established next summer and ready for year-round, multi-purpose remediation immediately.

Providing the infrastructure to reach all youth may seem like a heroic undertaking, but it is the minimum we must do to regain our economic competitiveness relative to other nations who already invest on this scale. For instance, in Japan half of all ninth graders, and virtually all of high school seniors, attend "juku", the Japanese equivalent of a basic skills academy, to supplement their already much longer and more intensive school days. Our students, and our future workers, cannot compete in basic skills, and it is not because of our "ethnic mix" or other factors noted by Japanese observers. It is simply that learning oportunities and efforts are unnecessarily limited.

As the supply of entry workers gets tighter and tighter, as we continue to lose ground to other nations whose workers have better basic skills, the wisdom of, and consensus, for such a major national effort will become more and more compelling.

YET WITHOUT BILLIONS OF DOLLARS OF NEW SPENDING, IT IS POSSIBLE TO BEGIN ADDRESSING THE BASIC SKILLS CRISIS TODAY AND TO PREPARE THE FOUNDATION FOR FULL MOBILIZATION IN THE FUTURE WHEN THERE IS NEED, CONSENSUS AND RESOURCES. The following steps are recommended:

Expanding Basic Skills Instruction Under Existing Programs

As a primary example, the Summer Youth Employment and Training Program (SYETP) enrolls 750,000 economically and often educationally disadvantaged teens each summer for 200 or so hours. Since these youth normally lose ground educationally during the summer, it makes obvious sense to provide basic skills instruction during some of these hours. Acting on this logic, Congress required that all Service

Delivery Areas under the Job Training Parntership Act assess the basic skills of SYETP participants and initiate basic skills instruction components to meet at least some of these needs. This did not go far enough. SYETP targets on exactly those youth who have the greatest problems, still early enough to make a difference. Congress should require that a minimum of two-fifths of participant hours be spent in basic skills instruction and an equal proportion be spent on remediation.

Under the Youth Employment and Demonstration Projects Act in the late 1970s, 22 percent of youth job training funds allocated to local areas was set aside for services to in-school youth under agreements between local education agencies and local job training sponsors. The collaboration helped to achieve institutional synergy and change. A similar set-aside would make sense under the youth portion of the Job Training Partnership Act. Congress must also be firm in assuring that the already stipulated 40 percent of job training monies go to youth. There are literally hundreds of millions of dollars of allocated youth resources which have gone unused and are available today for increased basic skills instruction activities.

Using JTPA resources specified above, or set-asides of compensatory education resources, the federal government should match local school expenditures for <u>extra</u> basic skills instruction outside the regular school schedule, whether delivered in or outside the school, but using a system which incorporates the approaches recommended by education research, i.e., individualized, self-paced, competency-based instruction, multiple media, support services and the like. The federal matching could also encompass parent-paid tuitions and business contributions for high-tech, "juku" instruction.

Finally, almost all social service programs, including corrections, welfare, vocational rehabilitation and vocational education, plus the Armed Forces, need to increase the share of resources spent on basic skills instruction for adults as well as youth. The economic viability of basic skills instruction investments depends on having multiple users to assure maximum utilization. There should be set-asides under all social programs for basic skills instruction. As an example, the last Vocational Education Act Amendments made a step in this direction with set-asides for community-based feeder programs to prepare the disadvantaged for entry into vocational training. These set-asides should be expanded, funded and enforced.

Capitalizing Basic Skills Instruction

High tech is not the solution to the basic skills crisis, but it is a necessary ingredient. Computers plus software for instruction and management, videodisk players and good courseware require capital investments. Yet most nonprofit social service providers lack capital, and they are hardly good credit risks since they are subject to annual funding uncertainties. The government-- which is the primary purchaser of these services and the source of these uncertainties and risks-- should share their consequences. One way is to finance equipment and materials at the level which could be amortized if funding remained constant over several years, to purchase courseware and equipment in volume to realize economies of scale, and to then provide this inventory on a lease-purchase basis to the recipients of funding. As an example, a Job Training Technologies Act might accompany the Job Training Partnership Act, providing credit equal to 25-40 percent of one-year allocations. These funds could be used to purchase equipment and materials, with the loans repaid over two or three years

from training expense budget lines. States and localities could purchase inventories of options from which delivery agents could then select, with payments subtracted automatically from grants, and with the equipment and materials providing security on the loans.

As an example, to implement mixed education and work under SYETP, each SDA would have to mount a number of remediation programs. Rather than wastefully establishing these activities ad hoc, capitalizing them out of one summer's funds, and then operating them during the summer only, a Job Training Technologies Investment Fund would permit volume purchase and turnkey installation of whatever system is desired, cutting materials and implementation costs 25 to 50 percent. Two or three times as much capital could be secured and then amortized over two or three summers. The high-tech centers would achieve greater efficiency in the delivery of basic skills instruction, moreso if they were utilized year-round, and JTPA could guarantee such use. Hence, the investment fund could be paid back with interest, and the public could realize an increased rate of return on its basic skills investment.

Franchising Effective Basic Skills Instruction

The CCP and CCP Learning Centers are operated like a franchise in the private sector (albeit a no-cost franchise). All users complete a rigorous planning and application process. There is required training in all aspects of the system. Many standardized elements are provided as a package, including options for a complete turnkey learning center. There is detailed reporting and recordkeeping plus monitoring to assure effective use. These franchise business approaches have helped achieve fidelity in replication, economies of scale, improved implementation and management.

Federal and state governments--as well as private foundations--can play an important role in supporting expanded franchising of effective models, and the Ford Foundation's strategy in franchising the CCP is instructive in this regard. A relatively small grant to an intermediary organization, the Remediation and Training Institute, financed the packaging of the franchise model. This was accomplished inexpensively by integrating materials and systems which had already been developed at great public expense and which were lying unused. Grants were then given to a few prototype delivery agents within the networks of nationally- and regionally-affiliated organizations to pay for implementation of the franchise--the capital and equipment for learning centers--with existing funds from ongoing public programs covering the cost of operations. Once the franchise model and franchising procedures were finetuned, Ford Foundation subsidies were reduced in half for a next round of showcase sites. The networked organizations received modest support to develop capacity as wholesalers of CCP franchises. After their affiliates became aware of the potential profitability of franchises, the direct subsidies were no longer necessary, and Ford Foundation support was reduced to covering the wholesaling costs until the scale of operations within the affiliated network became adequate to support continued central services.

The Ford Foundation applied this strategy with most of the major nationally-networked community-based organizations--Opportunities Industrialization Centers of America, National Urban League, SER/Jobs for Progress, National Puerto Rican Forum and 70001 Ltd. But there are countless other possibilities for basic skills instruction franchise wholsesalers to meet the needs of minority colleges, recreation and sports programs, union training, business

associations, or churches. States could support statewide wholesalers of different models. For instance, in Texas and Colorado, special-purpose nonprofit organizations (Texas and Colorado BASICS or Basic Skills Investment Corporations) were established to help implement learning centers in all institutions throughout the state.

At the national level, Congress should establish a public/private Basic Skills Investment Corporation (U.S. BASICS) to coordinate such activities. Private foundation and business sector resources could match the small federal investments which would be required.

Providing Courseware More Economically

Scarce social capital might also be profitably applied to make proven tools and technologies more readily available for basic skills instruction delivery agents. Every day millions of Americans copy movies on their VHS or BETA players, disks on their microcomputers, and text on their photocopiers. These duplication mechanisms are inexpensive and widely available. Yet microcomputers sit idle in schools and training programs for lack of instructional software; learners work with out-of-date and limited print materials; and audiovisual technologies are used infrequently because the cost of videotapes is so great relative to the percent of time they are used. Most publishing companies do not make money selling to the decentralized social programs, because marketing and distribution costs are so great. Intermediation is needed in this inefficient market.

Every social program and activity should be using a microcomputer with an integrated spreadsheet, database and word processing system. They should have a variety of core software for every instructional purpose. A range of

reprinted materials should be available to supplement or substitute for commercial materials, or for take-home and disposable assignments for learners. They should have a library of audiovisuals on every subject of instruction. These are basic tools of the trade.

To make them available, all training and education materials developed with public and private foundation resources should be placed in the public domain for reproduction by any nonprofit organization. Particularly useful would be materials developed for Armed Forces remediation and training. Licensing arrangements could be made with private publishing companies, as is done to acquire software for CCP users, permitting unrestricted copying of materials. Outright purchase might make sense for materials which would be widely used. For a few million dollars, selected software, audiovisual and print materials adequately covering most basic skills objectives could be purchased and the copy restrictions removed.

The distribution of these varied materials could be decentralized through libraries or resource centers which would provide software, print materials and videotapes on a range of subjects to any organization delivering public services, even providing the equipment so that they could be copied. This would minimize distribution costs and maximize dissemination. These materials would not substitute for all commercially available courseware, but would provide a foundation on which to build and would assure a baseline of reasonably adequate tools and technologies.

Making New Technologies More Cost-Effective

There is also need for the public sector or private foundations to take the lead in technology applications where the market is malfunctioning. One such example is

videodisk use. A videodisk player costs only a few hundred dollars, and for a few hundred more it can interact with a microcomputer. Videodisks cost only a few dollars each to produce once courseware is developed. All technologies are proven, and there is no doubt that this is an effective mechanism for teaching, as well as storing, retrieving and delivering text information. The constraint is that it is expensive to develop elaborate courseware for videodisks--several hundred thousand dollars per disk--so few disks are produced, few organizations buy disk players because there are few disks to play, hence prices are high for the disks which are available because their production costs must be amortized over limited potential users. If the Government Printing Office or some nonprofit intermediary offered a set of 25 videodisks covering beginning reading and math, GED preparation, world-of-work and consumer economics, and perhaps a few occupational skills training courses, at the $20 or so per disk needed to cover reproduction and dissemination costs, it is likely that thousands of delivery agents would then buy videodisk players because there would be enough inexpensive courseware to more than justify the equipment outlay. Once these thousands of delivery organizations had videodisk players, they could then consider more sophisticated commercial courseware, thus creating a larger market to amortize videodisk development costs and hence to lower courseware prices. When optical disks become a cost-effective technology, the same approach could be adopted to mainstream use as rapidly as possible.

Bringing Competition To The Basic Skills Marketplace

Though there are some investment and frameworking measures like the above where increased government involvement makes sense, there is a real need for less government delivery and increased competition. The government is the primary

purchaser of social services, and each agency or bureaucracy with the power over resource allocation tends to maintain its monoply by funding its separate cadre of projects and providers, with which it then establishes a working relationship. In some cases it may choose to provide services directly to gain even more control. In either case, the treatment options become whatever slots are open in the funded projects, and the needs of the providers frequently take precedence over the needs of the clients.

The vocational rehabilitation model provides a noteworthy exception. In this case, each individual is assessed and a treatment account established, with a treatment amount depending on the severity of need. Any required services can then be purchased from the most cost-effective providers to meet assessed needs.

With microcomputer spreadsheet and database programs, and with modems for communication, it is possible to keep track of units of services, as well as hours and outcomes of each service, at little cost and with very little effort. As an example, CCP users around the nation track time spent on every lesson, unit and level of instruction, learner satisfaction with the materials, numbers of supplementary activities completed, entry-characteristics of participants plus in-program and post-program outcomes, including gains on normed tests. All test results are automatically collected for all learners, and every quarter these are analyzed nationally to determine the results on every item on every test for thousands of learners. All this information collection is done on inexpensive Apples in the learning centers which pay for themselves in a month or so by the time savings in automating the scoring of tests and other functions. At the national level, it is possible to print out any record or analyze any aggregation of records at almost no cost.

The critical element is an information system which standardizes definitions, gathers all--and just--the information needed for teachers, project managers and funding agencies and developers, accompanied by user-friendly software for automating and simplifying all functions. In other words, information is simplified to the lowest common denominator, built into the model and automated to the maximum extent feasible.

Perhaps the single most important measure to support basic skills instruction is to establish a comprehensive information system which would span education, training, vocational education and vocational rehabilitation, drug treatment, family services--indeed, all of the funding sources and programs for basic skills instruction--defining service and benchmarks in standard categories, tracking the hours of each service for each individual in a uniform way, gathering standard information about entry, in-program and post-program outcomes, and keeping track of all dollars spent on each individual.

Once services are tracked in this way, and delivered on an individual account basis, it would be a logical next step to begin purchase services in "building block" units from multiple sources--and conversely, for "building block" service delivery agents to provide services to many different funding agencies on an individual-account, rather than project-grant, basis. A funding agency would then decide on the right provider for a specific client based on the price, comparative performance and suitability for the client, and would use vouchers or performance contracts for units of service administered and delivered on an individual account basis.

High Yield Investments

These measures are all feasible. Given the documented, bottom-line payoffs of improved basic skills, their costs are minimal:

Providing financing for establishing and equipping basic skills franchises is costless. The public is buying the services and it will get more for its money, as the CCP demonstrated, if these services are produced using the most efficient tools, technologies and production functions. The economies of scale from volume purchasing, and the efficiency from using the increased capital which can be justified if financed over several years, far exceed the interest costs in multi-year financing. There is no risk where the buyer of basic skills instruction is also the lending agent.

Establishing a universal management information and accounting system for basic skills instruction would cost a few million dollars; implementing it would cost a little more. But this would represent just a fraction of what is spent each year by thousands of programs, agencies and organizations in designing and changing management information, evaluation and reporting systems. Once established, the paperwork reductions, the timesaving from automation, the reduced costs of evaluation and the increased competitiveness which would be facilitated in the marketplace, would offset any development costs in short order.

Support for packaging and disseminating basic skills instruction models, and for establishing franchise intermediaries, would require modest additional resources, but all of these could be reallocations of existing funds. For instance, a set-aside for franchise intermediaries in

national legislation would simply reduce the amount available wasted in reinventing the wheel in every local area. Incentive grants to areas and deliverers to get them to adopt franchised models would reduce allocated forumla funds, but not delivered services.

If more dollars were spent for the packaging and dissemination of already-proven approaches, and less for development and evaluation of new models, the payoff of our scarce social investment capital would undoubtedly increase.

Finally, letting a little more competition and freedom of choice into the basic skills delivery system will involve little cost but a good deal of friction as resources are shifted from agents and agencies performing inadequately. Some will be hurt and many "Mom-and-Pop" operations will long for the good old days before competition. But the result will be more efficient and effective basic skills instruction.

It is time to stop deliberating and start acting. We do not need regression equations to tell us that people with limited skills have limited opportunities. Statistics documenting that millions lack the most rudimentary competencies merely confirm our everyday interactions with those unable to perform successfully in the home, community and workplace. Every mother and father believes that their children can learn with the right help and with hard work, so the conclusion that well-designed education programs improve basic skills, should come as no surprise. Common sense coincides with the consensus of experts about the ingredients of effective education. Evaluations merely validate what any observer would conclude from a visit to a CCP Learning Center, that extraordinary results can be achieved when the right ingredients are combined in a businesslike way. There should be no need to prove that

basic skills is a profitable public investment when almost everyone is willing to sacrifice to improve their own education and to provide learning opportunities for their sons and daughters. No more studies, evaluations or commissions are needed to document, debate and dissect what we all already know to be true in our hearts and minds. It is time for action. We have the resources, the tools, the knowledge and the need. WE CAN AND MUST ADDRESS THE BASIC SKILLS CRISIS NOW TO PROVIDE ALL AMERICANS AND OUR NATION AS A WHOLE THE COMPETENCIES WHICH ARE CRITICAL FOR FUTURE SUCCESS.

ADDITIONAL QUESTIONS BY SENATOR KENNEDY

SENATOR KENNEDY: What are the costs of the Comprehensive Competencies Program (CCP)?

DR. TAGGART: The full CCP cost per instructional hour in the first quarter of 1986 was $13.09. At the risk of unflattering comparisons with other education programs which usually ignore capital costs and in-kind contributions, this CCP unit cost measure appropriately includes an ascribed capital cost of $3.28 per instructional hour to amortize the learning center equipment and courseware over two years assuming a 10% interest cost, as well as the $3.40 imputed value of staff, space, equipment and courseware contributed in-kind to CCP Learning Centers. Using similarly conservative yet realistic definitions, CCP instructional hours are defined as the time learners are in the centers actually doing work, so CCP costs per hour are inflated relative to other basic skills instruction programs calculating costs on the basis of scheduled, rather than attended and applied, hours. Recognizing these differences in accounting conventions, there is no argument that CCP hourly costs exceed those of traditional education. For instance, public school operating costs averaged $3200 per student in 1985, with capital costs adding $400 more. With the typical school schedule consisting of 180 school days of five, 50-minute instructional periods, and an assumed attendance rate of 80 percent, the cost per hour of attended instruction was $6.00, or less than half the hourly cost of CCP instruction.

Yet the critical issue is not the cost per hour of instruction, but rather the cost per grade gained as a result. In public school, the "normal" student gains 1 grade level in a subject each year (though students like those entering CCP average only .7), or $720 for each subject-specific gain. In CCP, learners advance a grade in 27 hours of reading instruction or in 20 hours of math instruction, translating into a cost per grade gain of $353 for reading and $257 for math, or an average of $305. Thus, CCP instruction costs half as much per grade gained even though it costs twice as much per hour.

No doubt, CCP Learners gained rapidly because they were building on the foundation arduously laid year after year in school. Relearning is unquestionably easier than learning the first time around. As indicated, CCP gain rates decline with longer periods of instruction, and CCP is not intended as a substitute for a sound educational foundation. But even in comparison to remedial programs which also build on previous learning and aim to help individuals catch up or get ahead in as short a period as possible, the same holds

true: The cost per grade gain output from CCP is far less even though its cost per instructional hour is greater. Adult basic education usually costs in the $5.00-$7.50 range, excluding facilities often provided in-kind. Basic skills components of job training programs typically cost more, $7.50-$10.00, because they target on the higher risk groups and may include counseling and other services. Studies suggest that adult basic education and job training programs usually achieve between .7 and 1.0 grade gains/100 hours in subject. Assuming low-end costs but high-end gains, these alternative basic skills instruction programs cost fifty percent more than CCP for a grade improvement in reading, and almost twice as much for a grade gain in math.

Basic skills instruction is a profitable social investment, but particularly so with the CCP approach. Follow-up studies of a national sample of young Americans have found that all else being equal, a grade-equivalent increment in tested reading and math skills is associated with 4% higher earnings after school leaving. A grade-gain of reading and of math requiring 47 hours of CCP instruction costs $600. For a typical out-of-school young adult, the five-year earnings increment associated with these improved skills would be $1500, or two and a half times the cost. This does not include the payoff of the educational credential which is more likely to be achieved if skills are enhanced early, nor the value of reduced childbearing and crime which are highly correlated with better basic skills.

Moreover, the cost-effectiveness of CCP can and will increase. It is important to remember that 1985 was the first use year for half of CCP Learning Centers, and costs were inflated by the start-up expenses and underutilization during phase-up of new centers. The median total hourly cost of CCP instruction for centers operating in the first quarter of 1986 was $13.89, but a third of centers had costs below $9.00 per instructional hour, and the median cost would have been only $2.47 if open hours capacity had been fully utilized. CCP Learning Centers in their first year of CCP use had total costs a tenth above those of longer-term users.

Utilization increases with operating experience. CCP instructional hours in the first quarter of 1986 represented less than a fourth of aggregate open hours capacity of CCP Learning Centers. Those in their first year of CCP use had open hours capacity utilization rates two-fifths less than those with two or more years operating experience.

Thus, CCP Learning Centers can potentially yield a grade-equivalent improvement in basic skills for as little as $300.

SENATOR KENNEDY: How are CCP Learning Centers funded?

DR. TAGGART: CCP Learning Centers are extremely flexible as well as efficient. They can provide core instruction or serve as adjuncts to other education and training components. Instruction may be offered on a "drop-in" basis, scheduled a few hours a week, or assigned as a full-time activity. Participation can last from a few weeks to many months; it can even be sequenced over a multi-year period. Because the CCP is completely modular, any combination of its Components, Tiers, Subject Strands, Levels or Units can be implemented in a CCP Learning Center and assigned to a CCP Learner.

The potential applications are diverse. CCP Learning Centers can serve dropout youth in combination with work or training and placement assistance; secondary and vocational students in remedial classes, school-to-work transition and summer work/education programs; college-bound youth and college students in college prep and in-college developmental education programs; young adults in military preparation activities; dislocated workers in public and private sector programs; adults and senior citizens in continuing education, adult basic education, and employment programs; offenders in correctional institutions and community treatment facilities; the handicapped in community-based and in-school remedial instruction programs; and even youngsters in pre-school activities.

CCP use can be initiated and supported under the Job Training Partnership Act, vocational rehabilitation, vocational education and union or employer job training. It can be part of state and local workfare and welfare efforts or Work Incentive and Head Start programs. It can be supported by adult basic education, public and private secondary and post-secondary school budgets and special federal and state education programs. CCP learning can be financed with corrections and mental health resources available for community or institutional treatment. Economic development, housing and recreation programs provide other funding options. Instruction can also be supported by foundations, corporations and individual sponsors, or delivered on a fee-for-service basis paid by learners or parents.

CCP Learning Centers are able to compete successfully for funding from a variety of sources. Centers operating in the first quarter of 1986 received an annualized average of $122,000 in cash grants or contracts plus in-kind contributions, more than covering operating costs and rapid amortization of investments. Support came from a variety of public and private sources, with the Job Training Partnership Act accounting for three-fifths of the total:

CASH AND IN-KIND SUPPORT FOR CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

Annual Total Projected From Quarterly Support Received	
Mean	$121,864
Median	87,032
Distribution	
Less Than $40,000	22%
40,000 - 80,000	28
80,000 - 120,000	15
120,000 - 160,000	11
160,000 - 200,000	8
Over 200,000	16

Source Of Support	Percent Total Support	Percent With
Job Training Partnership Act	58%	81%
Vocational Education	4	11
Secondary Education	10	32
Post-Secondary Education	5	14
Corrections	1	1
Welfare	3	6
Other	20	20

The CHAIRMAN. Dr. Knapp?

Dr. KNAPP. Mr. Chairman, my name is David Knapp. I am President of the University of Massachusetts system, and I am also Chairman of the Massachusetts Corporation for Educational Telecommunications and Chairman of the Committee on Telecommunications of the National Association of State Universities and Land Grant Colleges.

Let me first, Senator, congratulate you on your new role as Chairman of the Committee. I am confident that under your leadership this will be an exciting and productive era in the development of education policy.

I would like to read a brief statement. Like most professors, if I extemporize, I tend to run in 50-minute sequences, and I think we can conserve time if I read quickly.

Everything we have heard today only further confirms what many of us in education have believed for some time—that we are failing in the enterprise of educating our nation's young people and that the consequences in terms of the long-term health of our economy will be severe.

Mr. Chairman, I have heard you say that educating our young people is the best investment in the economy we can make. I share that view, but I believe that we are not making that investment.

The fact is, we face a critical shortage, as we have heard, of qualified teachers at all levels. In Massachusetts, our home State, the Commissioner of Education recently predicted that our schools will need between 10,000 and 20,000 teachers in the next ten years just to replace those who will be retiring. That is above and beyond the shortages we are already experiencing in mathematics and in the sciences.

It seems to me that we do not have many options. We can attempt to train new teachers, but it is my impression that in the context of budget realities at all levels of government, we cannot afford to make the total, enormous investment required to meet this challenge in traditional ways.

I would add that even if we could find the resources to attract and train new teachers, the lag time involved would mean that at least half a generation of young people would be left behind.

As an educator for almost 35 years, I have become increasingly convinced that at least part of the answer to this problem and others lies with the application of telecommunications to the classroom. We can create new opportunities for students at all levels. Teachers can more easily remain current in their fields, and workers can be retrained at their worksites.

I am convinced that telecommunications provides us with an efficient and flexible means to accomplish this. Let me give some examples.

A small group of rural high school students, for example, unable to take advanced calculus because their school cannot afford to offer it, can take the course via telecommunications link with a professor at the State's major university several hundred miles away. Students at other rural schools can also take the course at the same time.

A physics teacher, seeking to keep informed on new developments in his or her field, can take a graduate-level course in the teachers' lounge, for example, during a free period.

A group of electrical engineers can take refresher courses in integrated circuitry at their workplace from a professor who teaches at a major university 50 miles away.

During the last ten years, telecommunications has made us interactive in ways we only imagined just ten years ago. And, unlike previous areas that sought to introduce television in education, the technologies of the 1980s are cheaper, easier to use, and vastly more flexible.

Until now, educational telecommunications has developed on an isolated, often haphazard basis. Many of us in higher education believe it is essential to the nation's future economic well-being to develop a more systematic approach. That is what we are trying to do at the Massachusetts Corporation for Educational Telecommunications.

Unlike many other efforts in educational telecommunications, our proposed network will be multipurpose and will serve the entire New England region. We will link schools, colleges and universities, industry and government in all six New England States. Programming will be drawn from the region's leading universities, its top teachers, and its most important companies.

We can achieve this because we have built a broadbased, public-private partnership, drawing on chief executive officers and top administrators from all sectors of New England life. It is this kind of broad-based, inclusive approach I believe we should use in trying to establish networks in regions throughout the nation as we build an effective educational telecommunications system for the future.

Again I want to thank you, Mr. Chairman, for inviting me here today, and I will be happy to answer any questions.

The CHAIRMAN. Thank you.

[The prepared statement of Dr. Knapp follows:]

R E M A R K S

DR. DAVID C. KNAPP

PRESIDENT, UNIVERSITY OF MASSACHUSETTS
AND
CHAIRMAN OF THE BOARD

MASSACHUSETTS CORPORATION FOR EDUCATIONAL TELECOMMUNICATIONS

Mr. Chairman and member of the committee, my name is David Knapp. I am president of the University of Massachusetts system. I am also chairman of the Massachusetts Corporation for Educational Telecommunications and chairman of the Committee on Telecommunications of the National Association of State Universities and Land Grant Colleges.

Let my first say, Mr. Chairman, that I am delighted to greet you as new chairman of this important committee. I look forward to an exciting era of debate on national policy and education, and, under your leadership, I am confident this committee will figure prominently in illuminating that debate and in setting directions for the future course of education in this country.

I want to speak briefly today to what I believe represents a forward-looking, a progressive and affordable approach to a particular set of problems and opportunities we have confronting us -- we as educators, as legislators, as a nation.

There have been a considerable number of reports and articles in the national press and electronic media in the last

three years concerning problems in the educational system in this country. Many of these equate the quality of education with the nation's economic status, with its economic competitiveness. This is absolutely correct: education is and has been the foundation of our growth as a political and economic force in the world ever since congress established the land-grant system of higher education in the nineteenth century. A skilled labor force, ready and creative human resources at all professional levels, an informed citizenry ... hand in hand with innovation in science and technology have helped to make this country what it is today. This combination of elements, properly cultivated, will ensure its continued greatness.

We in higher education sometimes feel, as I'm sure you on this committee do, that we face a set of seemingly intractable problems in our education system. At the same time, we know it is our responsibility to provide leadership in solving these problems, not only in higher education but on all levels.

It is for this reason that we in Massachusetts and, on a national level, the National Association of State Universities and Land Grant Colleges have begun to develop a more comprehensive approach to educational telecommunications.

By educational telecommunications I mean a technology which gives us:

- the ability for a single teacher to simultaneously work with students at widely separated schools;
- the ability for computers at different locations to communicate with each other;
- the ability to meet with people at other locations via two-way television.

We believe telecommunications is one way to address some of our most serious problems in our education system. Further, we believe telecommunications can help us solve these problems in a cost-efficient, relatively inexpensive way. In fact, we are promoting telecommunications because those of us in higher education -- especially public higher education -- are acutely aware or the fiscal restraints confronting government on every level: federal, state, and local.

Before I describe the benefits of telecommunications, let me briefly speak to the myriad of challenges we face in the coming years.

First, and foremost, we must recognize that we can no longer talk about the "information age" or the "knowledge economy" as if they were futuristic considerations. We are now living in an era where all our students -- from kindergarten students to college students to older workers seeking part-time instruction -- must prepare themselves for a sophisticated, service-oriented economy that relies on complex and fast-changing technologies. And we are living in an era where the American economy must compete in an increasingly sophisticated and closely-knit global economy.

To compete in this international marketplace, we must have a highly skilled workforce. Unfortunately, even though we've diagnosed the problem repeatedly, American schools continue to graduate students who are less proficient than those of our international competitors in the crucial areas of science, math and foreign languages. And our schools tend not to produce graduates in many of the most important technologies. Japan and the Soviet Union, for example, graduate three times as many engineers per capita as the United States.

Perhaps the gravest problem we face in meeting the challenges of this era is the shortage of qualified teachers on all levels. In our home state, the Commissioner of Education recently predicted our schools will need between 10,000 and

20,000 teachers in the next 10 years just to replace those who will be retiring. These numbers do not account for the shortages we are already experiencing -- indeed the nation is experiencing -- in math and science teachers. Moreover, many of those who are teaching math, science, and computer science are not certified in these subjects.

Additionally, American college and universities face critical shortages in engineering and computer science departments, as professionals are lured away by higher salaries in industry.

Another problem we face is the persistent inequities among our school systems, a problem made worse by tighter budgets on all levels. In Massachusetts it is not uncommon to find a wealthy community spending thousands of dollars more per student than is spent in a poorer community right next door. Perhaps more telling, in recent years we have found even wealthy communities in Massachusetts have cut important courses in everything from advanced mathematics to German because of the combined pressures of limited resources and teacher shortages.

Advances in technologies such as telecommunications, video cameras and cassette recorders, and personal computers and

software, should provide additional sources of quality instruction and thereby help to narrow the persistent gap between rich and poor communities. But in many cases this gap has actually widened because only the wealthier schools can afford the new technology.

Finally, the nature of the new economy has made life-long learning an increasingly vital factor in both opportunity for individuals and the long-term health of the economy. Probably the most dominant characteristic of today's economy is its dependence on change and innovation. Workers on all levels must keep pace with a sometimes dizzying rate of change in the workplace. In this environment, life-long learning opportunities are essential for workers of all kind: professionals in rapidly developing fields such as engineering and health care (where updating of skills and knowledge are almost constantly required); workers in mature industries who have lost or face the prospect of losing their jobs; and workers who traditionally have been cut out of the job market -- the poor and minorities, particularly those who speak English as a second language.

As I mentioned before, the problems we face as a nation can sometimes seem overwhelming. Given the budget realities we face on all levels of government, there is not nearly enough money

available to rebuild every school, retrain every teacher, or give personal, on-site instruction to every student and worker who needs it.

That's why I'm here today. I believe educational telecommunications holds great promise for meeting these challenges efficiently and in the context of today's budget realities. Moreover, we can improve the quality of instruction for many students while helping to eliminate the gross inequities we know exist in education today.

The most dramatic way telecommunications can change our educational landscape is through what we call "distance learning." By distance learning we mean bringing skilled teachers and faculty to students who otherwise not have access to such resources. Consider these examples:

- a small group of rural high school students, unable to take advanced calculus because their school cannot afford to offer it, take the course via telecommunications link with a professor at the state's major university several hundred miles away. Students at other rural schools take the course at the same time.

- An ambitious inner city student takes a class in computer science from a skilled teacher in a wealthier school district.

- A group of schools in a given county arranges for classes in certain languages, such as German and Russian -- no longer available to students in most of the county's schools due to budget cuts -- to be offered to interested students throughout the county via telecommunications.

- A physics teacher, seeking to keep informed of new developments in his or her field, takes a graduate level course in the teacher's lounge during a free period.

- A group of electrical engineers takes a refresher course in integrated circuitry at their workplace from a professor who teaches at a major university 50 miles away.

- One of the nation's leading experts in artificial intelligence, who has left full-time teaching to take a six figure salary at a leading computer

company, teaches an AI course to computer science majors at several colleges hundreds of miles away.

This is what we mean by distance learning. By combining the demands for particular courses across a number of school districts or among many colleges and universities or among a group of companies, we can create the "critical mass" of students needed to offer specialized and advanced level courses. Students benefit from the ability to make limited dollars go further. And the nation benefits from a more skilled and educated workforce.

In short, telecommunications can break down the geographic and physical barriers which create the barriers to opportunity for individuals and advancement for the economy.

And now is the time for the United States to begin a comprehensive effort. In many ways, we as a nation have been slow to move into educational telecommunications, even while we have enjoyed the benefits of telecommunication advancements in our homes and workplaces. During the past ten years, telecommunications has made us "interactive" in ways we only imagined ten years ago. Most American communities now have cable television systems which provide us with a broad selection of entertainment and educational programming in our homes.

On Capitol Hill, members of Congress and their staffs can watch many of the Hill's most important deliberations on a television set in the office, thereby improving communication among members and eliminating the wasted time members and staff spend traveling between buildings. Members now have computers in Washington which can communicate directly with their district offices, thereby improving constituent service and saving time and money.

Unlike previous eras that sought to introduce television in education, the technology of the 80's is cheaper, easier to use, and vastly more flexible. Consider these important technological advances:

- Sattelites now enable educational institutions to simultaneously distribute live television programs to hundreds of sites, regardless of topography or distance;

- Low cost, easy to use video equipment allows teachers and students to make their own television programs.

- Cable television systems now exist in most

communities across the country, often allowing school programming to reach a student's living room.

- Computers can be interconnected, allowing users at home, at work, or at school to tap the resources of major educational institutions across the country.

- Viewers can interact with television programming via computer, audio, or two-way video hookups.

Until now, educational telecommunications has developed on an isolated, often haphazard basis. Many of us in higher education believe it is essential to the nation's future economic well-being to develop a more systematic approach.

That is what we're trying to do at MCET. Unlike many other efforts in educational telecommunications, our proposed network will be multi-purpose and will serve the entire New England region. We will link schools, colleges and universities industry, and government in all six New England states. Programming will be drawn from the region's leading universities, its top teachers, and its most important companies.

We can achieve this because we have built a broad-based public-private partnership, drawing on chief executive officers and top administrators from all sectors of New England life. It's this kind of broad-based, inclusive approach I believe we should use in trying to establish networks in regions throughout the nation as we build an effective educational telecommunications system for the future.

Again, I want to thank you Mr. Chairman and all the members of the committee for inviting me here today and I will be happy to answer any questions you might have.

The CHAIRMAN. Mayor Flynn?

Mayor FLYNN. Thank you, Senator, for inviting me to be here this afternoon. I want to address the issue specifically, in the area of urban education.

Senator, as you well know, the economic climate in Boston is very good these days, as well as in Massachusetts, and in no small measure because of the leadership that you have exercised since you have been a member of the United States Senate representing our great State.

But I would say that while the economic skies are blue at the moment, I see potential storm clouds gathering on the horizon. And those clouds can be seen in the ever-mounting evidence that we are not preparing our children to be the doers and the leaders of the future.

These clouds can be seen in every city, as has been my experience talking to many mayors across the country. These clouds are in the form of not educating our children, an aspect of which is important to the future of our country.

We know also that if we do not prepare the children now, we pay the consequences later. We know that 60 percent of all the inmates in our prisons lack a high school diploma. Many of these inmates read at levels of a fourth, fifth, or sixth grade education, or even lower.

When dropout rates climb, when test scores plummet, and the rate of illiteracy creeps up and up in America, we face a crisis.

Public education, as we well know, has always been the great equalizer in American history, for the Polish, for the Irish, for the Jewish people, for any racial, ethnic population.

I think what is happening in our country today is that we are creating a two-tiered society. No longer is education the great equalizer. In fact, in my opinion, a lot of the highest levels of education are educating the affluent very well, but I think they are babysitting for the poor.

In Boston, frustration with public education mounts daily. Parents are really anxious to know what is the future of their children. Children lose confidence and faith in the system and in themselves, unfortunately. Business leaders wonder how prosperity can be maintained without a well-educated, trained workforce.

Everyone is wondering what we are doing, and I believe that we should examine some new ideas in our country. We have to get back to some of the basics of a sound educational policy.

We have a policy in Boston that I think could be emulated across this country. It is consistent with our "partnership" programs. We have in the area of housing, the Boston Housing Partnership, which has been copied by the Commonwealth of Massachusetts. We have the ACCESS Program, in which the business community in Boston puts down a $5 million endowment, and it guarantees scholarships to qualified graduates of the Boston public school system; it also guarantees them an opportunity at a job when they successfully complete their high school and college training.

These are the kinds of guarantees that I think have to be made to our students, because I think that they have to see that there is something at the end of the diploma. And they are seeing right

now that they are not able to compete in the workforce, and for that reason, they are wondering what is the future ahead of them.

I think it is really important to establish that this partnership has been extended to the youth partnership. And I am so happy to be here, Senator, because just the other day, as you and I talked about on the phone, I announced a Boston Youth Partnership. The Boston Youth Partnership is a partnership to assist the families of Boston in providing better social and economic opportunities for their children. These come in the areas of health, job training and recreation, as well as in education, particularly dealing with the issue of the school dropout problem that is plaguing many American cities and the rate of illiteracy in our cities. We have a vast increase, influx, of new people coming into our cities.

These kinds of partnerships, are necessary. At one time we could rely on the Federal government in a significant way for providing the kind of help necessary to uplift people out of poverty and put them on the road to economic hope. That road to opportunity is no longer there, because the Federal government recently has detoured that route into a more disadvantageous position for millions of poor Americans.

So in large respect, it is up to the cities to work very, very cooperatively with the businesses to establish these kinds of partnerships because it is in fact in the business community's enlightened self-interest to move forward.

I would suggest that this ACCESS Program in a partnership such as Boston has is something that perhaps the Federal government could follow. The families of America need significant help. Education, the problems of the youth of America, are not going to be solved in the classroom alone. There are a myriad of reasons why kids are dropping out of school and dropping away from economic opportunities. It has a lot to do with the course of direction, as I see it, in a humble way, about our country's priorities.

If you were to pick up any national periodical or newspaper, you would find that the country is very much occupied with the issues of foreign policy; they are also occupied with the issue of military appropriations. Those are very legitimate issues, obviously. But I also see that there is a "missile", if you will, headed right at the American cities. This "missile" is in the form of poor education and poor job training for our youngsters.

I think there has to be a "Star Wars" program to head off that "missile" so that better health care, education and job opportunities can turn right back into that same road that we talked about in terms of providing opportunity.

I am very, very pleased that this new Congress is taking a major turn on that road of economic opportunity and hope for Americans. I would say, however, that the one issue that is so much out there that needs to be addressed, in addition to the many issues that the Senate and this country is facing, is the issue of education. If we do not educate our children now, and provide hope and opportunity for our children now, we will pay the price later on.

I am anxious on behalf of the mayors of this country to work with you, Senator Kennedy, and the members of this Committee in seeing to it that the types of partnerships that we are trying to implement in the City of Boston with the cooperation of the business

community and the Superintendent of Public Schools, Dr. Wilson, can have a meaningful impact in turning around the declining level of education that, in fact, is the future of our cities and our strong economy.

Thank you, Senator.

The CHAIRMAN. Thank you very much.

[The prepared statement of Mayor Flynn follows:]

CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR
RAYMOND L. FLYNN

TESTIMONY OF MAYOR RAYMOND L. FLYNN
Before the
Committee on Labor and Human Resources
United States Senate
January 14, 1986

SENATOR KENNEDY, SENATOR HATCH, I WANT TO THANK YOU AND ALL THE MEMBERS FOR INVITING ME TO TESTIFY BEFORE THIS ESTEEMED COMMITTEE, ON THE CRITICALLY IMPORTANT QUESTION OF THE QUALITY OF EDUCATION IN THE UNITED STATES, SPECIFICALLY URBAN EDUCATION.

SENATOR KENNEDY, AS YOU KNOW, THE ECONOMIC CLIMATE IN BOSTON IS VERY GOOD THESE DAYS. THIS IS DUE IN NO SMALL MEASURE TO THE LEADERSHIP THAT YOU HAVE EXERTED FOR BOSTON AND MASSACHUSETTS DURING YOUR DISTINGUISHED CAREER IN THE SENATE. YET WHILE THE ECONOMIC SKIES ARE QUITE BLUE AT THE MOMENT, I SEE POTENTIAL STORM CLOUDS GATHERING ON THE HORIZON.

THOSE CLOUDS CAN BE SEEN IN THE FORM OF THE EVER-MOUNTING EVIDENCE THAT WE ARE NOT PREPARING OUR CHILDREN TO BECOME THE DO-ERS AND THE LEADERS OF THE FUTURE. AND THESE CLOUDS CAN BE SEEN IN EVERY CITY. THERE IS A CRISIS IN EDUCATION, IN ALL ASPECTS OF THE DELIVERY OF THIS CRUCIAL SERVICE. WE KNOW THAT WHEN WE DO NOT PREPARE OUR YOUNG PEOPLE FOR A PRODUCTIVE FUTURE, LIFE TEACHES THEM ITS OWN BITTER LESSONS.

FOR EXAMPLE, WE KNOW THAT OVER 60 PERCENT OF ALL INMATES IN OUR PRISONS LACK A HIGH SCHOOL DIPLOMA. MANY OF THESE INMATES READ AT LEVELS ASSOCIATED WITH A FIFTH OR SIXTH GRADE EDUCATION -- OR EVEN LOWER.

WHEN DROP-OUT RATES CLIMB, WHEN TEST SCORES PLUMMET, AND THE RATE OFILLITERACY CREEPS UP AND UP, AMERICA FACES A CRISIS. PUBLIC EDUCATION, WHICH HAS BEEN THE GREAT EQUALIZER IN AMERICAN HISTORY, IS AT RISK OF BECOMING THE GREAT POLARIZER OF AMERICAN SOCIETY -- CREATING A TWO-TIERED SOCIETY THAT EDUCATES THE AFFLUENT AND BABY-SITS THE POOR.

IN BOSTON, FRUSTRATION WITH PUBLIC EDUCATION MOUNTS DAILY. PARENTS ARE ANXIOUS ABOUT THEIR CHILDRENS' FUTURE; THE CHILDREN LOSE FAITH AND CONFIDENCE IN THEMSELVES AND IN THE SYSTEM: AND BUSINESS LEADERS WONDER ALOUD HOW PROSPERITY CAN BE MAINTAINED WITHOUT A WELL-EDUCATED AND TRAINED WORK FORCE.

EVERYBODY WONDERS, WHAT ARE WE TO DO? WHAT WE ARE DOING NOW IS CLEARLY NOT WORKING. I BELIEVE THAT WE SHOULD SEEK TO FUNDAMENTALLY REVAMP THE WAY WE LOOK AT EDCUATION. WE HAVE TO GET TO THE BASICS OF A SOUND EDUCATIONAL PHILOSOPHY. MAYBE WE SHOULD START LOOKING AT IDEAS LIKE AN EXTENDED SCHOOL YEAR. PARENTS TELL ME THAT THEY ARE NOT SURE THAT 180 DAYS IS THE IDEAL LENGTH OF THE SCHOOL YEAR. AND OTHER COUNTRIES ARE MORE SUCCESSFUL WITH LONGER CALENDARS. I THINK WE SHOULD STUDY THE POSSIBILITY OF A LONGER CALENDAR.

AMERICANS ARE CALLING FOR A BETTER AND MORE CONSISTENT APPROACH TO DISCIPLINE. COUPLED WITH THIS MOVE SHOULD BE AN INITIATIVE WE ARE PURSUING IN BOSTON: ANTI-DRUG EDUCATION FOR KIDS STARTING AT THE EARLIEST GRADES.

BUT RECENTLY, I SUGGESTED THAT ONE OF THE KEY INGREDIENTS TO REAL CHANGE AND IMPROVED PUBLIC EDUCATION IS THE CREATION OF A RESPONSIBLE INSTITUTIONALIZED ROLE FOR PARENTS IN THE DECISIONS FACING THE FUTURE OF THEIR CHILDRENS' EDUCATIONS. THIS CAN BE DONE WITHOUT THE EXPENSE OF EVEN ONE ADDITIONAL NICKEL, AND IT CAN GO A LON WAY TOWARD ESTABLISHING IMPROVED ACCOUNTABILITY ON THE PART OF THE ADMINISTRATION OF THE SYSTEM. I WANT TO COMMENT IN A MOMENT ON THE PRIMARY IMPORTANCE OF THE FAMILY.

YET OTHERS ARE ALSO ACCOUNTABLE FOR THE EDUCATIONOF THE YOUNGER GENERATION. BUSINESS LEADERS AND ELECTED OFFICIALS AT THE FEDERAL, STATE, AND LOCAL LEVELS MUST ALSO BE HELD RESPONSIBLE. IN BOSTON, WHERE WE HAVE AMERICA'S OLDEST SYSTEM OF PUBLIC EDUCATION, WE HAVE COMMITTED OURSELVES TO A RETURN TO EXCELLENCE, WITH THE CONSCIENTOUS EFFORTS OF SUPERINTENDENT LAVAL WILSON AND THE BUSINESS COMMUNITY.

WE CANNOT IGNORE THE NATIONAL DEFICIT. BUT WE MUST UNDERSTAND THAT IT WAS NOT OVER-SPENDING ON EDUCATION, OR JOB TRAINING, OR HOUSING, OR HEALTH CARE, THAT CREATED THE DEFICIT.

IN LIGHT OF THE DRAMATIC FEDERAL RETREAT FROM ITS TRADITIONAL PARTNERSHIPS WITH CITIES IN THESE CRITICAL AREAS -- EDUCATION, JOB TRAINING, HEALTH CARE, AND HOUSING -- WE IN BOSTON HAVE HAD TO DEVELOP NEW PARTNERSHIPS THAT ARE PERHAPS THE BEST OF ANY CITY IN THE COUNTRY. THESE LOCAL PARTNERSHIPS SHOULD NOT BE VIEWED AS SUBSTITUTES FOR FEDERAL ACTION. BUT THESE LOCAL PARTNERSHIPS CAN PROVIDE A MODEL FOR REDIRECTING FEDERAL POLICY.

ONE EXAMPLE OF THESE PARTNERSHIPS IS BOSTON'S "ACCESS" PROGRAM.

AS MANY COMMITTEE MEMBERS MAY BE AWARE, A COLLABORATION AMONG BUSINESS LEADERS, PUBLIC SCHOOL ADMINISTRATORS, AND CITY GOVERNMENT OFFICIALS RECENTLY ANNOUNCED THE PRELIMINARY RESULTS OF THE "ACCESS" PROGRAM IN BOSTON. ACCESS STANDS FOR ACTION CENTER FOR EDUCATIONAL SERVICES AND SCHOLARSHIPS. IT WAS ORGANIZED WITH AN INITIAL $5 MILLION ENDOWMENT, UNDER THE LEADERSHIP OF THE C.E.O. OF THE NEW ENGLAND LIFE COMPANY, EDWARD PHILLIPS.

ACCESS HAS TWO BOLD OBJECTIVES: TO PROVIDE SCHOLARSHIPS FOR ALL QUALIFIED PUBLIC SCHOOL GRADUATES WHO NEED THEM, AND PROVIDE MEANINGFUL JOBS TO THOSE KIDS WHEN THEY GRADUATE. "ACCESS" IS PROVIDING GENUINE ACCESS TO A PRODUCTIVE FUTURE FOR INCREASING NUMBERS OF PUBLIC SCHOOL STUDENTS.

IN THIS SAME SPIRIT, MY ADMINISTRATION RECENTLY ANNOUNCED THE ORGANIZATION OF A BOSTON YOUTH PARTNERSHIP, TO MARSHAL NEW AND EXISTING SERVICES FOR YOUTH IN THE AREAS OF EDUCATION, HEALTH, RECREATION, AND EMPLOYMENT. WE SET THE SCENE EARLIER FOR THIS COMMITMENT BY INCREASING THE PUBLIC SCHOOLS' BUDGET BY 25 PERCENT OVER THE PAST THREE YEARS, AND BY INVESTING TENS OF MILLIONS MORE IN IMPROVED SCHOOL FACILITIES.

THROUGH ALL THESE PARTNERSHIPS WE OUR ESTABLISHING A COVENANT AMONG ALL FACETS OF OUR COMMUNITY -- GOVERNMENT, SCHOOLS, BUSINESS, ACADEMIA, AND PARENTS -- THAT WILL ENSURE INCREASED ATTENTION TO EDUCATION AND ACCOUNTABILITY FOR ITS RESULTS.

IN MY JUDGEMENT, THE CONGRESS SHOULD SERIOUSLY EXAMINE THE NATIONAL POTENTIAL OF THE PARTNERSHIP APPROACH.

FINALLY, AND MOST IMPORTANTLY, MR. CHAIRMAN, MORE AND MORE AMERICANS ARE CONCLUDING THAT THE QUESTION COMES DOWN TO THAT OF THE FAMILY AND THE HOME ENVIRONMENT. THE DEPARTMENT OF EDUCATION FOUND THAT THIS IS TRUE IN JAPAN, IN THE REPORT THAT THEY RELEASED SEVERAL DAYS AGO. AND COMMON SENSE TELLS US THAT THIS IS TRUE FOR THE U.S.

I BELIEVE IT WAS PLATO WHO TOLD US THAT "THE DIRECTION IN WHICH EDUCATION STARTS A MAN WILL DETERMINE HIS FUTURE LIFE." THE LOGICAL EXTENSION OF THIS IS THAT THE DIRECTION A CHILD RECEIVES IN THE FIRST YEARS OF LIFE WILL DETERMINE HIS OR HER FUTURE SUCCESS IN SCHOOL. CLEARLY, A KEY ASPECT OF GOOD PERFORMANCE IN SCHOOL IS THE PRESENCE IN THE CHILD'S LIFE OF A SUPPORTIVE HOME ENVIRONMENT. WE KNOW THAT FAMILIES IN DISTRESS COMPRISE CHILDREN IN DISTRESS. THE KIDS' PROBLEMS ARE ONLY MORE OBVIOUS, BECAUSE THEY MANIFEST THEMSELVES IN POOR GRADES AND POOR BEHAVIOR.

EDUCATION BEGINS AT HOME. AND ANY TRUE REFORM OF THE NATION'S PUBLIC EDUCATION SYSTEMS WILL INCLUDE MEASURES TO STRENGTHEN FAMILIES. ANY MEANINGFUL STUDY OF THE PROBLEMS WILL NOT STOP AT THE SCHOOL YARD GATE, BUT KEEP GOING TO THE FAMILIES' FRONT DOOR.

GOVERNMENT CANNOT TAKE THE PLACE OF THE FAMILY. BUT WE CAN MAKE FAMILY LIFE BETTER, THROUGH A VISIONARY AND COMPASSIONATE PARTNERSHIP WITH PARENTS AND CHILDREN.

UP TO NOW, I HAVE BEEN TALKING ABOUT THE ROLE OF EDUCATION, BUT AS IMPORTANT IS THE ROLE OF JOB TRAINING. 27 MILLION ADULT AMERICANS ARE ILLITERATE, AND THE PROBLEM HAS BEEN INCREASING BECAUSE OF THE INADEQUACIES OF THE EDUCATION SYSTEMS.

TO MAINTAIN OUR ECONMIC COMPETITIVENESS IN THIS MODERN WORLD ECONOMY, AND TO ENABLE AMERICANS TO PARTICIPATE IN THE NEW JOBS BEING CREATED BY AMERICAN INDUSTRY, WE MUST OVERCOME THE PROBLEMS OF ILLITERACY AND INSUFFICIENT TRAINING.

BOSTON IS ONE OF THE FEW CITIES IN THE COUNTRY TO CONSISTENTLY INVEST IN JOB TRAINING. WE SPEND MILLIONS ANNUALLY TO INCREASE THE JOB SKILLS OF OUR RESIDENTS SO THAT THEY CAN SHARE IN BOSTON'S BOOMING ECONOMY. JOB TRAINING AND ADULT LITERACY PROGRAMS ARE AN IMPORTANT BRIDGE BETWEEN OUR DOWNTOWN ECONOMY AND THE NEIGHBORHOODS OF OUR CITY.

AN INNOVATIVE PUBLIC-PRIVATE PARTNERSHIP FOR JOB TRAINING IN BOSTON HAS ALREADY RAISED NEARLY $10 MILLION TO PERMANENTLY ENDOW JOB TRAINING AND LITERACY PROGRAMS. I BELIEVE A NATIONAL PARTNERSHIP ON LITERACY CONSISTING OF BUSINESSES, GOVERNMENT, AND THE CITIES IS AN IMPORTANT SOLUTION TO THIS CRITICAL NATIONAL PROBLEM

WE HAVE TO QUESTION OUR PRIORITIES AS A NATION WHEN ONE SEES ALL THE TIME AND MONEY SPENT ON "STAR WARS" DEFENSE FANTASIES AND A CONFUSED FOREIGN POLICY COMPARED TO THE NEAR ABSENCE OF MEANINGFUL ATTENTION TO EDUCATION AND TRAINING -- WHERE THE REAL FUTURE OF AMERICA LIES.

WE HAVE A MISSILE HEADED RIGHT FOR AMERICA'S CITIES. THAT MISSILE IS POOR EDUCATION AND INADEQUATE TRAINING. I DON'T SEE ANY "STAR WARS" DEFENSES PREPARED TO STOP THIS MISSILE FROM DESTROYING THE QUALITY OF LIFE IN OUR URBAN CENTERS.

IF WE WALK AWAY FROM EDUCATION NOW, SOCIETY WILL HAVE TO PAY LATER.

AMERICA'S HISTORY HAS BEEN ONE OF PROVIDING INCREASED ECONOMIC OPPORTUNITIES FOR EACH GENERATION. BUT RECENTLY THE ROAD OF OPPORTUNITY AND HOPE FOR RESIDENTS OF AMERICA'S CITIES HAVE BEEN BLOCKED.

THIS CONGRESS HAS THE UNIQUE OPPORTUNITY TO REOPEN THIS ROAD TO SOCIAL AND ECONOMIC OPPORTUNITY FOR ALL.

I URGE THE COMMITTEE TO KEEP THESE POINTS IN MIND AS YOU EXAMINE THE FUNDAMENTALLY IMPORTANT QUESTION OF MAKING EDUCATION WORK FOR AMERICA AND HER CHILDREN.

The CHAIRMAN. I would like to ask your own view, Mayor Flynn, about the concern of the parents, families in Boston or other parts of the country, about their concern about whether their children in the public schools system are really getting education.

Do they speak to you about this? They do to me. I am sure you are much more out on the street than I am. But is this a central concern?

Secretary Bennett indicated that 70 or 80 percent—some very dramatic figure—of parents are very satisfied. It was certainly an indication on the record that as far as the parents go, they believe the public school system is in pretty good shape.

What are you finding? Do you find that the parents whom you are talking to have anxiety about the quality of education and whether their children are really going to have the kind of opportunity that they may have had or may not have had for other reasons, in Boston?

Mayor FLYNN. Senator, included in my comments—I tried to summarize—but included in them was a very clear message about that very issue that you raise. There has to be an institutional role for parents in their children's education because nobody has a greater interest in children's education than parents.

What good does it do, Senator, to show up at a meeting where the parents say has very little influence over the course of direction of their children's education? I think that is why parents do not attend meetings; that is why they lose interest, because they do not have an institutional role.

I think you have hit the question right on the head when you say the role of parents. It has to be institutionalized. And there are going to be all kinds of questions about governance of the various elected school boards and so forth in Boston and other communities, and I just think that it is about time that we return to the role of parents being taken seriously. And when they are taken seriously, I think you are going to find that it is then when we are going to be able to turn this around.

So parents play the critical role. They have the most at stake, and they have the most to lose.

The CHAIRMAN. And they are anxious about the quality of education in the schools, are they not?

Mayor FLYNN. Senator, if there is one fundamental issue that transcends all issues relative to education, from my experience, it is that there has to be a more meaningful role for parents in the education of their children. They have to be taken seriously by the educational bureaucrats. Somebody may be listening to them, but they are not following any of the kinds of strong, intuitive instincts that they have as parents, and I think that that is the real, central issue to this whole debate.

The CHAIRMAN. Bob Wagner, let me ask you about some of the programs in New York that have been particularly successful as regards the dropout issue. You have indicated you are going to get some other results in fairly soon. You have been involved in these issues for years and years, not only in this responsibility but previously. What information do you have on programs that have been successful, and what is your own kind of gut feeling about programs that can be successful?

Mr. WAGNER. Well, in many ways, Senator, in the long term, the early grades are going to be the real answer to preventing the dropout problem. Having a program that starts for four-year-olds, and having the right class size in the early grades, is the long-term answer. In the short-term, what we have tried to do are a number of different things; first, to recognize that for many of the youngsters in our system, not only do they come from families where there is only one parent, but in some cases without families altogether, in other cases, with two parents working, that the school has had to, if not stand in loco parentis, fulfill part of the role that used to be played by the family and by social organizations.

In 36 of our high schools, and in about 60 of our junior high schools, we have brought in community-based organizations from the neighborhood to work with the teachers and to work with the youngsters, and our belief is that this has been a true success. We saw in the first year of the program a reduction in the dropout rate of about 6.5 percent down from 42.5 percent to about 35 percent. Some of that is statistical adjustment, but some of it, I think, reflects the impact of this program.

In addition to that, I think the second year will show even more positive results, but we will have those in two weeks.

The CHAIRMAN. Will you send those results on to us?

Mr. WAGNER. Absolutely, Senator.

The second point is a point that Mayor Flynn made—and in some ways, Boston is ahead of New York in this regard—that is giving youngsters a sense that what they are studying in the long term is going to have meaning. Relating schools to work, guaranteeing that a graduate of the high school system will have a job, I think can make a difference. I think it has in Boston. We have a similar program in part of Brooklyn for a few of our high schools. Those schools that have a work orientation have remarkable acceptance from students. In the case of one of our schools, Murray Bergtraum, which is business career-oriented, 25,000 students in the New York City public school system applied to that school for 800 places last year. And this is not a white school; it is a 98 percent minority school; it is not an elite school. It is that youngsters want to go to a school that relates to work.

At this school, the attendance rates are better than at Bronx Science, better than at Stuyvesant, or better than most elite schools.

The CHAIRMAN. What happens when they graduate?

Mr. WAGNER. They in effect have a career ahead of them. They will have worked with the company; they will have the skills that will allow them to function in the economy, giving them a sense that those three or four years in high school will really relate to the future very importantly.

Just one other point on dealing with dropouts. There are two key factors in youngsters dropping out. Among female dropouts, 50 percent of the dropouts has to do with teenage pregnancy. In this regard, we now have nine health clinics, comprehensive health care clinics, functioning in our schools, bringing doctors from the best medical complexes in the City of New York into the schools, and in addition to that, for those youngsters who have pregnancies, in ten of our schools we have what is called the Life Program, which provides day care from the very earliest point that the

youngsters have been born, and remarkable success in terms of bringing kids back to the schools.

A second point on that. The other major group dropping out are over-age youngsters who have either come from foreign countries, have not progressed along the way, or who do not fit in their classes. What we have tried to do there—and we have not adequately replicated some of the successes we have—is to find alternative settings for those youngsters in alternative schools, in different class structures, offering immersion as opposed to the normal 45-minute periods, one after the other. So far, here again, the indications seem to be positive.

The CHAIRMAN. Dr. Taggart, what happens when these young people go back into the mainstream of the public education system? Have you followed this along at all, once they are able to sort of catch up and develop the kinds of skills that can keep them academically in the schools? Have you got any information on that?

Dr. TAGGART. Yes. And the answer is absolutely, you have got to hit them early and continuously. It is not a one-shot intervention. Once they get on-track, get caught up, the dropout rates decline, they tend to achieve self-motivated group. In New York City, as an example, we have got six centers in the New York City colleges, Bank Street College, the Mayor's Coalition for Literacy, the Private Industry Council. Some of those are alternative schools, serving them after they have left; others are those getting them early, before they get in trouble. What happens to disadvantaged youth is they tend to lose—they gain at the same rate during the school year, and then they lose during the summer. They fall behind half a grade-level every year. So you have got to get them at 14, 15, 16, 17. Each summer in New York City, they have done that in the summer program, where they have taken almost 1,000 kids and put them in these alternative settings. They gained instead of lost ground, came back on-track, and then did well once they got back in school.

The CHAIRMAN. Does that say anything about having them go to school all year around?

Dr. TAGGART. What we would argue for is many more hours of education. I think the dramatic finding from the Japanese-American studies is how little our youth are in school. So we need more hours of education everywhere. For instance, sports. Sports are a way of getting hold of lots and lots of kids who cannot get careers in college because they cannot pass the new SAT standards. If you can get a kid to go to school for two hours, or get education for two hours, by saying he cannot play basketball otherwise, that is as good a way as any to get hold of them. Any hours you can get are good.

Mayor FLYNN. Senator, I do not know how controversial this is, but a chart that is not up there—I think it was in U.S. News and World Report, this week's edition—compare the United States with other countries in terms of the school calendar.

The CHAIRMAN. We have got that chart; I did not put it up.

Mayor FLYNN. It is significant. It shows that Japan, West Germany and other countries have a much longer extended calendar. And I think it is about time that we looked seriously at that.

The other thing is the good question you asked about the follow-through on it. Just quickly, the Boston Compact Program—we have got the programs in place, but we run out of money. The Boston Compact identified all the kids that we tracked who graduated from the Boston public schools last year. Ninety-three percent of the kids are either going to college or university, working, or in the military. So the unemployment rate among those kids is quite low, and when you consider that the major population of the kids in our public school system is minority, that is a rather significant positive finding.

The problem with it is that too many of these kids are dropping through the cracks; they are falling through the safety net. And a lot of it has to do with family environment or lack of economic opportunities that discourage these kids and force them out of school. They see their father does not have a job, or they see lack of economic opportunity, so that they fall through the cracks.

The CHAIRMAN. Let me ask, Dr. Taggart, the Ford Foundation supports this. What are the principal sources of funding in various school districts—or does it vary extensively?

Dr. TAGGART. It varies nationwide. Of the 200 centers, 60 percent of the funding comes under the Job Training Partnership Act. Thirty-five percent of the funding has come under regular school budgets, and the remainder has come under grant programs and private sector. Increasingly, unions and private sector are beginning to pick up the slack and support, as well.

The CHAIRMAN. Would you be kind enough to submit a little bit more information on how the funding works, and what have been some of the particular problems?

Dr. TAGGART. Yes, sir, absolutely.

The CHAIRMAN. That is very interesting, the Job Training Partnership Act. I was not aware of that.

Dr. Knapp, I imagine this concept has been tried to some extent in some other areas of our country, or maybe in other countries around the world, I guess, using just television for educational purposes. Can you tell us just a little on the background, how you got to this, and how this is somewhat different—or is it different?

Dr. KNAPP. Well, there has been a fair amount of sporadic use of television and television networks around the country. Texas is one prime example, in the Fort Worth-Dallas area. Kentucky is just launching a State system.

How ours is different, I think, is that we are looking at a regional network, with a feeling that with the availability of satellites and being able to bounce things off a satellite, we can deal with the whole region as well as the State. And we have a lot of interest from people in all of the other States. President Coor of the University of Vermont, for example, has been very interested in interacting with the system.

We got to the point, or I did, of starting on the Telecommunications Corporation, in a very strange sort of way. We had been televising courses at the Amherst campus, putting them on videotape, and then putting them in a car and sending them into Route 128, where they play out. And it seemed to me when we were sending videotapes by car to high-tech industries, we were sort of doing a pony express in a high-tech age.

We got to looking at the potential for a network so that we could link the campuses directly into the worksites of people who want to upgrade their education and their skills.

We did a major exploration of the involvement of public schools, universities, hospitals, how one could go into an interactive system using computers as well as video, and trying to find this as a supplement to a learning exercise, but one which really uses resources much more effectively.

That is a short history.

The CHAIRMAN. What kind of interest have you had in the school systems?

Dr. KNAPP. We have strong interest at the present time. We have superintendents across the State who are very interested.

I think it is partly tied to the resource base. Those schools which tend to be more affluent can indulge themselves in modern technology; those that are less affluent have less capability, but those are the ones that we really ought to be helping.

One of the advantages, I think, of telecommunications for education is that it tends to raise the quality of educational opportunities within the State. And where we have a strong home rule sense for the towns and cities of Massachusetts of going their own way, you get lots of ups and downs in the quality of education. That, I think, is one of the things we hope we will be able to do as we move along with the system.

The CHAIRMAN. Your hope is to try this program and examine it and evaluate it, given the fact that you have been able to get important academic support for it. As in any new program, it is going to take some testing and trying. You have been able, as I understand, to get good business support for it. Then you will try it and test it and see what its application would be nationwide.

Dr. KNAPP. Yes. I think this is the most comprehensive effort that I have seen. It is the first regional effort that has been tried, and I think we really have to test it out and see whether it is applicable. I think it will be, and I think I can foresee regional networks scattered around the country, linking universities and schools together.

The CHAIRMAN. Well, it certainly seems to me to be worth the effort to both implement it and to support it, and I hope we can find ways in which we can be helpful.

In conclusion, I think we have seen that the economic battles of tomorrow are being fought, really, in the classrooms of today, and too many of our children are being disarmed unilaterally by educational policy and budget dogmas that are both anti-student, anti-opportunity and anti-future. The prospects are bleakest for children most neglected in recent years. The school systems and educational institutions may be restored to their former stature, but the children whose lives have been stunted by these years of neglect may never be restored to their full potential.

I am deeply concerned that the country be able to compete economically because America will not have sufficiently trained, literate people to do the work of the future. The men and women who will be the American workforce in the year 2000 are in kindergarten today. If we want them to be able to compete—and we do—if we want them to be able to earn a good living and jobs that last—

and we do—then today, in 1987, we must be willing to make the investments in their education that they need, and we shall.

I think it is especially foolish that we ignore our needs in education on the theory that every available dollar must be given to the Department of Defense. As Secretary Brock reminded us yesterday, the modern military requires skilled manpower. One-third of the manpower called for by the Navy must be college-educated. In the face of this need, the same Administration that has asked this year for two new aircraft carriers has asked us to cut student loans by $4 billion. I am beginning to think the Administration just wants ships and does not care whether it has sailors.

We are all aware that we are working today under the shadow of enormous Federal deficits. The States and localities are feeling the crunch. We must do more with less, but we must ask not only what resources we need, but how to extract the most from these resources. We must seek ways to stretch education funds. We must pursue principles which reward school districts for meeting improved goals; adopt programs which combine Federal dollars with dollars from the States and localities and private industry in order to stretch our resources as far as possible. Through satellite technology, I think we can make new educational possibilities available to pupils whose horizons are limited.

We want to commit ourselves to excellence. Parents and students must have more concern with the students' test scores than with the score of the football game. That is the only way we can, I think, end up as a nation that really fulfills our responsibility under the American Dream.

I want to thank our panel for being here today. We will be keeping in close touch with you as we shape and fashion these programs. We are very interested in this Committee in finding out what is happening in the local communities, in our cities and in our States that are focusing on these questions, and ways that we can be of further help to all of you. We also want to be supportive of the creative and imaginative programs that are being tried and tested and are proving to have some constructive and positive results in strengthening our whole education system.

[Additional material supplied for the record follows:]

TESTIMONY OF DR. DOROTHY RICH
President of the Home and School Institute

Submitted as additional written testimony
Senate Committee for Labor and Human Resources
National Goals in Education Hearing
Chaired by Senator Edward Kennedy
January 14, 1987

The economic battles of tomorrow, referred to in Senator Kennedy's statement, are being won and lost today not only in our classrooms but in our nation's living rooms and kitchens.

Major studies over the past two decades have indicated that parents are significant educators of their children, that all families have strengths that can be built upon, and that not even the best school can do the job alone. This is an old, "new idea" but invariably the family is the forgotten factor in discussions of our students' and our nation's school success.

Parent involvement in education is a source of a great deal of rhetoric but little action. It's as if it's too big and too discouraging and too hot a topic to address, open to all kinds of misinterpretations. That is why it is so important for the Federal government to face this issue and to provide leadership so urgently needed by states and localities.

The goal which I believe must be incorporated into our nation's agenda is to increase family involvement in children's education in a meaningful, productive way that builds student motivation

and achievement. To date, the traditional form of Federally supported family involvement in education has been the Parent Advisory Council. This is not a method that focuses primarily on student achievement. It focuses on parent political, not necesssarily educational participation. While this may have been a useful strategy at one time, it is no longer an appropriate major framework for family involvement in view of what has been learned through research and in view of the demographic and work-related changes that have occurred in family life today.

What has not changed is that families, across all economic and racial lines, care about their children and their schooling. What families need is practical help to turn their caring into practical school-supportive action at home.

I base the following recommendations for Federal consideration on almost 25 years of developing and testing programs involving children, families, and teachers across our nation. The goal when I first began the Home and School Institute continues today-- to provide for our national's families the" tools" (the programs and materials0 they need to help their children learn. I am delighted to see that my recommendations and studies made over the years now figure in such reports as the National Governors Report "Time for Results," and Secretary Bennett's "What Works" and "First Lessons."

But reports are not enough. Current legislation has not caught

up with the research and the body of experience about parents as educators of children, working in partnership with the school.

What should Congress consider?

Overall, focus on how to help families as "home teachers" of their children, not to keep children out of school, but to build children's skills and attitudes to do well in school. The interest in parents as educators cuts across political lines and would satisfy diverse political forces. It has the strength not only of research and common sense, but of a broad political constituency.

Reach extended families, not just parents, with programs they can do easily at home.

Emphasize family strengths, not deficits. Families want to help their children. Today, it often harder to know how to help, especially for adults who may not have good school experiences themselves.

I recommend three specific strategies for Congress to consider:

a/ Home Curricula: Support programs for families to use at home to reinforce but not duplicate the work of the school. This includes activities in the kitchen and at the supermarket. Complete systems for home learning include the Teacher-Parent Partnership Project which my Institute developed for the National Education Association and which is now being successfully used by NEA in 18 states.

b/ Training: Support training for school personnel in strategies and programs to work in partnership with even "hard to reach" families. Most teachers have to date received no training in the research and the programs that are now available to work with today's family. Reaching the family must be considered as important as reaching the child. Teachers need training to work effectively with adults.

c/ Employment-- Family Education Corps (FEC): Support employment and training for personnel working from school to home who have the specific job of enhancing the family's eductional role. This function should be considered an integral part of Chapter I services. In view of recent Chapter I research about the loss of lower grade gains when children move to the upper elementary grades, it is probably more important to hire home-school workers than it is to hire additional in-class teacher specialists.

Chapter I research (NIE Study Team 1986) underscores the findings of Epstein (Congressional testimony 1985) and our own Institute program evaluations: "If teachers had to choose only one policy to stress, results suggest that the most payoff for the most parents and students will come from teachers involving parents in helping their children in learning activities at home." Additional research supports the role of families in helping to prevent student drug and alcohol abuse.

Our Institute is just beginning now a three year demonstration project, funded by the MacArthur Foundation, to select and work with five diverse, major national organizations to assist them with innovative family as educator programs for their members and the community they serve. Among the groups are the Parents Without Partners and the American Postal Workers Union and the National Association of Colored Women's Clubs.

Legislation has not caught up with the new research knowledge and the new practices that need to follow from it. What's been learned makes sense and it requires some cents for setting up the basic, minimum infrastructure of people and information to

mobilize and unleash the enormous voluntary efforts of parents and the wider community .

An information campaign is needed, which could be staffed by para- professional or professional Family Education Corps workers, even senior citizens. Communities need be informed about the importance of families as educators and families need to be supplied with practical information about how all families can help their children. All places where families gather can be involved in distributing home learning materials. This includes businesses, clinics, hospitals, libraries, as well as schools.

The programs above can be mounted for modest costs, certainly when considering what they can be anticipated to accomplish. What's vital to keep in mind is that this home-school-community work is like yeast in breadmaking. If the bread can be seen as the Federal and state compensatory programs, it is this home-school effort, like yeast, that makes bread and student achievement rise.

For more information including specifics on these programs, please call or write:

Dr. Dorothy Rich
Home and School Institute
Special Projects Office
1201 16th St. NW
Washington, D.C. 20036
212-466-3633

87-02

TESTIMONY OF DOROTHY SHIELDS, DIRECTOR, DEPARTMENT OF EDUCATION AMERICAN FEDERATION OF LABOR & CONGRESS OF INDUSTRIAL ORGANIZATIONS BEFORE THE SENATE COMMITTEE ON LABOR & HUMAN RESOURCES ON NATIONAL GOALS IN EDUCATION

January 14, 1987

From its earliest days, organized labor has been in the forefront of the effort to establish and expand educational opportunities for workers and their families. The best possible public education should be available for all who seek it to the limit of their potential for achievement. This country should have an educational system that will extend the promise of a democratic society to all citizens and provide the nation with an educated and skilled work force for its enrichment and defense. Therefore, labor has championed the establishment of a universal public school system. We have advocated compulsory schooling, quality vocational training, English classes for new immigrants, rigorous curriculum in the classrooms, recognition of the dignity of teachers through organization and just wages, federal aid for elementary and secondary education, and federal financial aid for higher education. Investment in education is investment in human capital. Thus, education has to be a priority.

The fact that we have a long way to go should not be used to denigrate America's considerable educational achievement. In 1900, ten percent of U. S. young people graduated from high school; today, 74% graduate. In 1970, one of seven workers had a college degree; in 1986, one of four workers has a college degree. These results would not have been possible without government programs -- Head Start, Chapter I, TRIO, Pell Grants, Guaranteed Student Loans and other programs that expand academic and cultural standards.

We compliment the Congress for supporting these targeted programs, and we urge continued support. The essential local management of education must be augmented by federal help and leadership. Educationally disadvantaged students from low and middle income families have gained from the Chapter I programs of the Education, Consolidation and Improvement Act (ECIA) and even more from the earlier Elementary and Secondary Education Act (ESEA). These services should be available to every child who is eligible at the elementary school level rather than the approximately 45% currently receiving benefits. Chapter I remedial services at the secondary level should be authorized. Similarly, funds to assist schools in desegregation must be maintained.

If we are to be a nation that is concerned with the preparation and education of a skilled workforce that is competitive in the international marketplace, a federal role and contribution in vocational education is essential. The vocational education program proves modest amounts of federal funds can lead to programs that raise standards, expand opportunities for the disadvantaged and disabled and encourage partnerships with labor and business. The AFL-CIO supports a continued federal commitment to a leadership role in vocational education and opposes the proposed phaseout of funds.

If one were to believe the rhetoric in the President's proposed FY '88 Budget, higher education no longer contributes to the health of our communities and nation, but only to the individual receiving it. Rather than seeking ways to improve on the grant/loan-work package of the 1960s and 1970s -- this Administration would replace traditional degrees with a B.D., Bachelor in Debt.

Expansion is needed in programs that provide work and education such as cooperative education, work-study, Perkins Scholarships, and maintain in-school subsidy for guaranteed student loans with modest interest rates if higher education is not to be limited only to the very wealthy. Pell Grants and guaranteed student loans have in the past opened the doors of higher education to low and middle income families and to increasing numbers of minorities. These grants should not be sacrificed to the Administration's pilot program which has escalating interest rates and already has been found wanting even by the people who are expected to provide the loans. The President of the Consumer Bankers Association, whose membership provides more than 80% of total student loans in the United States, termed the Administration proposals wholly unacceptable and predicted that few if any lenders will participate.

The nation must prevent higher education costs from restricting opportunity. Tomorrow's youth will come increasingly from single-parent, low-income, minority families. The poorest segment of today's population will be the workers of tomorrow. In his "Demographic Imperatives for Education," Harold Hodgkinson warns that tomorrow's retirees will be supported by only three workers instead of today's 17 today. Those three workers will need something better than the pay levels of the service jobs being created today.

Community colleges have 50% of our college population and provide a model of education affordable and accessible to urban youth. Partnerships with state and local government, labor, business and education have increased the effectiveness of our public schools. Similar and more extensive arrangements should be considered at the collegiate level to increase the rate of college completion.

Unions and their members are dismayed at what is happening in education. Like all Americans, our members have always cherished the dream that they will be able to provide more for their children than their parents provided for them. To that end, they contribute millions of dollars each year for scholarships for young people and their unions fight for good schools and financial help for their children. Increasingly, they find themselves in the bind that they, too, need the benefits of further education and training whether it be skill training or college computer courses to hold their jobs or to move into new jobs with different technology. New immigrant members and displaced workers need language and basic skill classes. We support federal aid to assist these workers to educate themselves and their families. Help is needed in the "less than part-time" category.

Unions have been working in partnership with industry, local government, often through collective bargaining to address these problems:

1) The UAW/Ford Motor Company Employees Development and Training Program established in 1982 offers training, retraining and developmental opportunities for active and displaced UAW-represented employees. The program has a national framework but is essentially a local undertaking. Basic skills, counseling and job search techniques are offered in-plant, and the program can take the UAW member into college classes.

2) Training and Education provisions of 1986 contracts of the Communications Workers of America deal primarily with off-hours personal and career development training. The CWA/AT&T program will be administered by a new non-profit corporation, the Alliance for Employees Growth and

Development. It will provide career counseling, and retraining from accredited colleges and schools to active and laid-off workers. CWA and Pacific Telesis have a similar program coordinated through California's extensive community college network.

3) AFSCME District Council 37 and the City of New York offer adult literacy, basic education, high school equivalency and career training programs. More than 1000 members are currently enrolled.

4) The International Ladies Garment Workers' Union (ILGWU), with four other AFL-CIO local unions in New York City, run a worker-family education program for learning English as a second language. The 35-week program is run cooperatively with the State Education Department and the New York City Board of Education. Almost 800 students have enrolled.

These are but a few examples of the ways unions are working cooperatively with new strategies aimed at fulfilling their traditional goal -- extending the opportunity for education for all who need it. They may be models from which others can learn as collective bargaining cooperation tailors solutions to specific needs. Organized labor's historic commitment to expand educational opportunities will be even more important in the new work place and the new technologies of the future.

Testimony of Frank P. Doyle
Senior Vice President, General Electric Company
On Behalf of the Committee For Economic Development

U.S. Senate Committee on Labor and Human Resources
January 14, 1987

Let me state bluntly at the outset that I do not believe that the American educational picture is all grim. I do believe that as a nation we've made some important progress-- in at least three respects-- over the past several years.

First... the evidence of slippage, failings and even crisis at all levels has become increasingly well known. Landmark commission reports-- especially the National Commission on Excellence in Education's "Nation At Risk" findings of 1983 and the recommendations for the teaching profession contained in last year's Carnegie "A Nation Prepared" report-- have helped focus our country's attention... and renew our sense of challenge.

Second... those reports and the urgings of business leaders embodied in CED's own study, "Investing In Our Children," as well as the experience and reflections of millions of people who work in-- or depend on-- American industry, have contributed to an increasing awareness of the link between the strength of our schools and the competitiveness of our nation.

Third... fresh initiatives are visible at the state and local levels, most dramatically in the South, where forward-looking governors and legislatures are increasing funding and raising standards for both students and teachers.

But despite this encouraging new environment for improving education, we're struck every day in American industry by how serious our problems

actually are... and by how much-- and how quickly-- we must change. I'm sure we're not alone at GE when we find it difficult to fill some jobs because applicants simply lack the basic skills-- as distinct from specific vocational training-- necessary to work. And many of our new hires still need fundamental education before specialized job training is effective.

The CED believes-- and our experience at GE confirms-- that public schools should focus on teaching basic skills: verbal and mathematical literacy; analytical ability; and disciplined learning habits. There's little we can do on or off the factory floor with employees who can't read, write or count... who don't know enough so they can learn more. Public schools should educate for fundamental "employability," and leave most specialized vocational and job training to employers.

Inability to perform current jobs with existing technology is only our first level of worry. Longer-term needs-- as the pace of change accelerates and the job skills in demand are transformed-- should also shape new policy. Two points from a new CED study, "Work and Change: Labor Market Adjustment Policies In A Competitive World," underscore this view. First, education is a worker's best defense in adjusting to rapid change, with years of education a critical factor in shortening the time it takes a displaced worker to find a new job. Second, education is also a worker's best offense as new technology-driven occupational shifts-- in both manufacturing and services-- place increasingly high premiums on acquiring more advanced skills on a rolling basis.

The adaptability of American workers rests on their ability to acquire new skills, and their success in turn will determine American productivity growth and our future standard of living. Educating for that dynamic employability is the greatest contribution the schools can make to U.S. competitiveness.

It won't be good enough to move slowly. The U.S. isn't the only major industrial nation renewing its commitment-- or committing new resources-- to education and workforce training. It isn't coincidental that the Japanese were so eager to conduct the recent joint comparative study with us; or that they're reforming their schools to ease some of their cultural rigidities; or that the Germans are further improving their already leading-edge technical training and retraining.

A good rule of thumb in business is change before you have to... because your competitors will. The same should apply in education... but we're already too late to be pre-emptive. Let's catch up where we must... and better leverage our strengths where we can.

Most critical is strengthening fundamental education, especially at the elementary and junior high levels, since high school is often too late to teach basic skills. That means paying teachers more to attract and retain individuals who bring excellence to the classroom. Schools districts should experiment with alternative pay systems which could link pay to performance on a group basis... and different levels of government should not flinch from spending more money to encourage and recognize quality and results. Any call for comprehensive improvement in the public schools that does not recognize the need for additional resources is destined for failure.

Let's make a formal commitment-- and fully fund it-- to the concept of lifelong learning. One-shot retraining or professional refresher courses are obsolete in the dynamic global economy. If there is a priority arena for public-private sector cooperation in education for the Nineties, continuing education for a changing workplace is it.

Let's build on successful models of cooperation with business, whether in persuading even more companies to contribute equipment, facilities, teachers or funds to targeted programs... better tapping business expertise to improve the use of technology in the learning process... or in tightening the link between graduating high school students and the workplace through cooperative work-study programs.

Reducing bureaucracy that suffocates teachers and siphons off money will allow business to help more and help better... and focus attention and money where it should be: on students and teachers in the classroom. That kind of change-- on top of expanded business involvement and philanthropy-- will encourage the business community to become an even more active constituency supporting improvement in the public schools and at the same time make our efforts more effective.

The days when a nation's leading competitive asset is its wealth of natural resources... are over. The days when a nation's leading asset is less costly labor... are over too. The days when a nation's winning assets are the flexibility of its economy, the proficiency and adaptability of its workforce, and the fundamental quality of its education at all levels... are here today. Thank you very much.

Testimony, U. S. Senate Labor and Human Resources Committee
Washington, DC, January 14, 1987
Patricia Albjerg Graham, Dean
Harvard Graduate School of Education

My name is Patricia Albjerg Graham. I am the Charles Warren Professor of the History of American Education and Dean of the Graduate School of Education at Harvard University. I would like to thank the committee for the opportunity to be here today to testify on a topic so important to us all, to our country as a whole. I commend the Committee on its initiative in calling attention to these issues in such a timely fashion. This action speaks to the Committee's recognition of the importance of improving the education of all Americans both for the benefit of the individuals and for the benefit of the nation. Our collective future rests upon our ability to assist the coming generations to become informed, effective, and caring citizens. The issue is finding the means by which we can achieve this goal.

Today I wish to talk briefly about two issues, and, if I may, to submit a longer statement for the record. The first of these is the need to build upon the successes that we have had - and to extend them - in making our school children literate. The second is to focus upon school teachers, who play a critical role in helping us realize our educational ambitions for our children.

Nine year olds read better in the United States today than at any previous time in our history, yet they and their elders do not read well enough. Based on a substantial amount of good research data, we know that children today are reading better, particularly in areas in which federal Title I and Chapter One funds have been concentrated, than they have in the past. Yet we also have abundant evidence from research reports to personal anecdotes that high school graduates in the United States today do not perform academically at a level that most of us believe to be desirable. Clearly we are not doing nearly as well with our high school students as we are with our elementary ones. This situation is a legitimate cause for concern for all of us, educators and non-educators alike.

During the past four years we have had a number of articulate, persuasive reports that have criticized the American educational system. What has been most useful about them, I believe, has been the manner in which they have brought public attention to a problem that too many of us have seen only as an issue affecting us through our own children. As fewer of us, particularly those of us who are white and middle class, have children in public school, I fear that we have been willing to permit poor educational conditions in schools that were principally serving somebody else's children. That is a very short sighted policy for our nation.

Much of the current reform thrust - laudably - has noted the absence of sufficient academic accomplishment, particularly at the high school level. The high schools in the United States, unlike the elementary schools, have never benefitted from any substantial infusion of federal support for academic programs, only vocational ones, although Title I was authorized to aid both elementary and secondary education but was never funded to do so. Much of the

current effort to rectify this low level of academic accomplishment in the high schools has been to raise standards, also a laudable idea, but raising standards ALONE will not raise accomplishment. For students who have difficulty with the high jump, simply raising the bar does not help them get over it. Nor does raising the passing grade for algebra, by itself, help the student learn quadratic equations. Therefore, something else is needed. That brings me to my second point: better teaching.

Although it would be desirable to place the obligation upon teachers to assure mastery of the curriculum by all their students, the present circumstances make it unreasonable to have such an otherwise reasonable expectation. For it to become reasonable to have such an expectation of teachers four things must change:

(1) Working conditions, including salaries, must improve. Schools must be organized to enhance children's learning, and the people who have the greatest role in enhancing that learning, teachers, must be recognized for the central players they are and enabled to function effectively. Too often schools are arranged to enhance bureaucratic requirements, some imposed by governmental agencies. Further, those responsible to the bureaucracy are paid the most. Those responsible for the children deserve the greater compensation.

(2) More able and diverse people must become teachers. We can no longer rely upon 21 year old women to supply the new teachers. Fortunately some such able women may still choose to become teachers, but we must enlarge our recruitment net to include others who may choose to spend a portion of their adult lives as teachers and who have the ability and training to do so. At Harvard we are currently conducting two programs for such nontraditional teachers. In this regard, we must also be especially attentive to reversing the current decline of minority teachers. All our children, minority and non-minority, need able minority teachers.

(3) Preparation and certification of teachers must assure both knowledge of subjects and pedagogical competence. In short, math teachers both must understand themselves and be able to explain quadratic equations to both the eager and to the disinclined pupil. The contributions of the new technologies hold great promise here, but they are as yet largely unrealized. Programs that prepare teachers must recognize that future teachers, like their students, exhibit individual differences, and efforts to require all teachers to complete identical training programs seem misguided.

(4) Both the public at large and the educators within it must agree on what our schools are expected to do, and both the lay members of the community and the professional educators must work collaboratively to achieve this agreed upon end. This agreement, largely lacking in the United States but so powerful in Japan, probably accounts for the principal difference between our two educational systems. Although I do not believe that we in the United States should seek the identical compact for our schools that the Japanese have, I do believe that we need greater agreement than we now have about their tasks. Our schools are institutions with a rank order of priorities for dealing with the young, and at the top of that rank order must be effective instruction in academic material. Schools can and should support the young in other ways as

well, but if they fail in their obligation to make the young truly literate, then they have failed in their fundamental task. The schools need the support of all of us in this effort.

AMHPS

THE ASSOCIATION OF MINORITY HEALTH PROFESSIONS SCHOOLS
400 First Street, N.W., Suite 712
Washington, D. C. 20001

Telephone: (202) 347-7878

Tuskegee University School
of Veterinary Medicine
Tuskegee, Alabama 36088
Walter C. Bowie, D.V.M., Ph.D.
Dean

Meharry Medical College
1005 D. B. Todd Boulevard
Nashville, Tennessee 37208
David Satcher, M.D., Ph.D.
President
Walter Lawrell, M.D.
Dean
School of Medicine
Reuben C. Warren, D.D.S., Dr. P.H.
Dean
School of Dentistry

The Morehouse School of Medicine
720 Westview Drive, SW
Atlanta, Georgia 30310
Louis W. Sullivan, M.D.
President and Dean

Texas Southern University
College of Pharmacy and
Health Services
3100 Cleburne Street
Houston, Texas 77004
Patrick R. Wells, Ph.D.
Dean

Xavier University of Louisiana
7325 Palmetto Street
New Orleans, Louisiana 70125
Anthony M. Rachal, B.S., M.Ed.
Executive Vice President
Marvalina Gross, Ph.D.
Dean
College of Pharmacy

Florida A&M University
College of Pharmacy
Tallahassee, Florida 32307
Charles A. Walker, Ph.D.
Dean

The Charles R. Drew Postgraduate
Medical School
1621 East 120th Street
Los Angeles, California 90059
M. Alfred Haynes, M.D., M.P.H.
President and Dean

Washington Representative:
Health and Medicine Counsel
of Washington
400 First Street, NW, Suite 712
Washington, DC 20001
Harley M. Dirks
President

January 15, 1987

Honorable Edward Kennedy
Chairman
Committee on Labor and
Human Resources
United States Senate
SD-429 Dirksen Office Building
Washington, DC 20510

Dear Mr. Chairman:

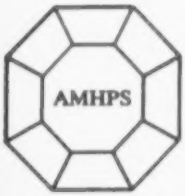
The Association of Minority Health Professions Schools commends you for your important and very timely hearings on national education and health goals.

Enclosed is our testimony for your hearing on January 14, 1987. We would appreciate you including our statement in your hearing record.

Sincerely,

Dale P. Dirks
Legislative Consultant

Enclosure



THE ASSOCIATION OF MINORITY HEALTH PROFESSIONS SCHOOLS
400 First Street, N.W., Suite 712
Washington, D. C. 20001

Telephone: (202) 347-7878

Tuskegee University School
of Veterinary Medicine
Tuskegee, Alabama 36088
Walter C. Bowie, D.V.M., Ph.D.
Dean

Meharry Medical College
1005 D. B. Todd Boulevard
Nashville, Tennessee 37208
David Sencer, M.D., Ph.D.
President
Walter Lawell, M.D.
Dean
School of Medicine
Reuben C. Warren, D.D.S., Dr. P.H.
Dean
School of Dentistry

The Morehouse School of Medicine
720 Westview Drive, SW
Atlanta, Georgia 30310
Louis W. Sullivan, M.D.
President and Dean

Texas Southern University
College of Pharmacy and
Health Services
3100 Cleburne Street
Houston, Texas 77004
Patrick R. Wells, Ph.D.
Dean

Xavier University of Louisiana
7325 Palmetto Street
New Orleans, Louisiana 70125
Anthony M. Rachel, B.S., M.Ed.
Executive Vice President
Marcellus Green, Ph.D.
Dean
College of Pharmacy

Florida A&M University
College of Pharmacy
Tallahassee, Florida 32307
Charles A. Walker, Ph.D.
Dean

The Charles R. Drew Postgraduate
Medical School
1621 East 120th Street
Los Angeles, California 90059
M. Alfred Haynes, M.D., M.P.H.
President and Dean

Washington Representative:
Health and Medicine Council
of Washington
400 First Street, NW, Suite 712
Washington, DC 20001
Harley M. Dirks
President

TESTIMONY OF

WALTER C. BOWIE, D.V.M., PH.D.
DEAN
TUSKEGEE UNIVERSITY
SCHOOL OF VETERINARY MEDICINE

AND

PRESIDENT
OF
THE ASSOCIATION OF MINORITY HEALTH PROFESSIONS SCHOOLS

PRESENTED TO THE

COMMITTEE ON LABOR AND HUMAN RESOURCES
UNITED STATES SENATE

CONCERNING

NATIONAL EDUCATION GOALS

JANUARY 14, 1987

Mr. Chairman and Members of the Committee, thank you for the opportunity to discuss what we believe should be major goals and objectives for improving our nation's educational system. The member institutions of the Association of Minority Health Professions Schools rely heavily upon programs of the Department of Education to fund the professional training of many minorities in the health professions. The eight institutions represented by our Association have graduated 43% of the nation's black physicians and dentists, 50% of the nation's black pharmacists, and 90% of the nation's black veterinarians. Programs under the jurisdiction of your Committee have a profound effect on the educational missions and success of each of our institutions. Minority students who attend our institutions depend greatly upon the support of resources allocated by your Committee. The collective and individual goals of our institutions to increase the number of black and other minority health professionals in the nation are profoundly effected by your recommendations.

Just a few years ago, a Task Force appointed by the Secretary of the Department of Health and Human Services reported a significant gap in health status among the nation's black population when compared to the nation's white population. Black infants are twice as likely to die in their first year of life as are white infants. The life expectancy of blacks

is five years less than that of whites. The Secretary's Task Force reported that annually, in the black community, almost 60,000 excess deaths occur because of the disparity in the health status. Evidence presented also indicates that the problem is growing, not getting better. Nevertheless, in the face of this widening disparity, the Administration has consistently proposed to eliminate or severely cut many Federal programs that would greatly assist in efforts to alleviate this devastating problem. It is unclear, to the students who attend our institutions, how some policy-makers can report on the critical disparity in health status among blacks and whites in the nation, and yet at the same time, propose budget reductions nearly wiping out federal support for the programs that train the professionals who will practice in the underserved, minority areas of our country.

Educational programs, under HHS's jurisdiction, are vitally important to desperate minorities seeking an education in the health care field. These programs include Health Professions Student Loans, Exceptional Financial Need, Financial Distress, Disadvantaged Assistance, National Health Service Corps Scholarships, and Health Education Assistance Loans. These programs should be strengthened and improved to allow more black individuals to enter the health professions. As you know, it is well documented that black health professionals are more likely to locate their practices in

under-served minority areas. This alone makes the case for continued emphasis on federal health professions training support for minority institutions and the students who attend these institutions.

While there may be an emerging abundance of some medical specialists in the nation, there is still a demonstrated and glaring shortage of minority health professionals. In fact, while blacks constitute nearly 12% of the total United States population, blacks account for only 2.6% of the nation's physicians, 2.9% of the nation's dentists, 2.3% of the nation's pharmacists, and 1.6% of the nation's veterinarians. This issue needs to be addressed, and the best way to narrow this critical health status gap is through continued support for the training of minorities in the health professions.

Funding for Pell Grants, Guaranteed Student Loans, College Work Study, Supplemental Educational Opportunity Grants are also critically important to both our institutions and our students. A major priority should be restoring these programs to a more realistic funding level.

Another important priority would be initiatives aimed at strengthening the research infrastructures of educational institutions that offer degrees in the health sciences. Such initiatives are particularly valuable and important in attempts to research those diseases and illnesses that are

more common to Blacks, and for the training of young clinicians, investigators, and scholars.

Mr. Chairman and Members of the Committee, thank you for the opportunity to express the views of the Association of Minority Health Professions Schools. Mr. Chairman, we also wish to commend you for your past support and efforts to close the gap in health status.

The CHAIRMAN. We stand in recess until tomorrow morning. Thank you.
[Whereupon, at 1:12 p.m., the Committee was adjourned.]

74-573 (240)